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ALEXA INTERNET PRESS CLIPS

November 1998 to February 1999


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'NET INSIDER

The Internet and the Citgo sign

The *Wall Street Journal* reported on Oct. 14 that the Internet, or at least a "chunk" of it, to use the *Journal's* terminology, was given to the Library of Congress.

It turns out that Alexa Internet, a Web crawler company in Seattle, gave the library an archive of a half million Web pages that adds up to about 2 terabytes of data.

The archive is a snapshot of the World Wide Web taken early last year. The data is housed in a computer rack-like structure with four bright red computer monitors stacked one on top of the other. The monitors display random pages from the archive every few seconds.

Why would the library want such a toy other than because it's fun to watch?

One of the tasks librarians undertake is that of archiving the times in which they exist. For example, they archive newspapers and sometimes tapes of TV and radio programs. This is so future scholars can get a better idea of the context in which events happened. For a historian it can be helpful to know what the popular press focused on during the time leading up to a major event, such as the start of a war, and what topics dominate conversation after the event.

This sort of archiving proved easy when all the news was in print. Microfilms of old newspapers did the trick. But things became more complex with the advent of film, radio and TV. It would be hard to assemble a good history of the Vietnam War without having access to archival copies of the evening news broadcasts.

Archiving the current world is even more difficult. More and more of what affects our lives is now found on the Internet in newsgroups, e-mail messages to mailing lists and Web pages. For example, huge numbers of people have had access to the Starr report via the Web. Some of them might have even read it, rather than just skimmed it looking for the naughty bits. While the report itself was published on paper, the backup material was not. The only way this material existed for most of the world was as bits on the Net.

Scott Bradner

I will say that archiving digital information can sometimes be difficult to justify. It can be quite hard to see what useful information for managing the next society could come from some Internet mailing lists. For example, a discussion about the evils of spam (the e-mail kind, not the canned meat product kind), approaching a kind of perpetual motion, has taken over the Compro mailing list.

Then again, in Boston a few years ago it was decided, for the sake of preserving '50s culture, that it was vital to preserve the big neon Citgo sign towering over Kenmore Square.

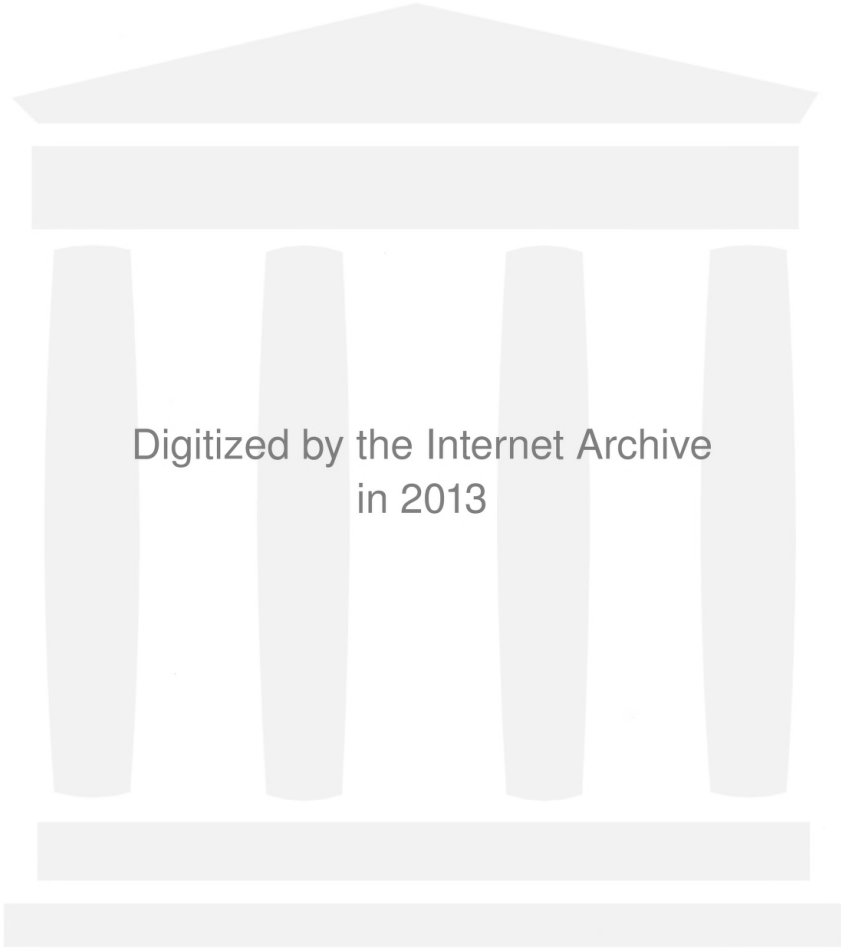
So, although culture is definitely on the eve of the beholder, the ephemeral Web will have to be part of the archive if future generations are to know what affects our thinking today.

Disclaimer: Contrary to the Harvard motto, of the world has proven to be ephemeral, but the above are my ephemeral observations.

Bradner is a consultant with Harvard University's University Information Systems. He can be reached at sob@harvard.edu.

NetworkWorld
Framingham, MA
11/2/98

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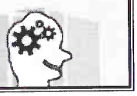
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Technology News

Microsoft IE 5.0 Beta Released

(11/04/98 12:12 p.m. ET)
By Richard Karpinski, InternetWeek

Microsoft released Wednesday the first public beta of Internet Explorer 5.0, available for download from its website.

New features include the addition of IntelliSense technology to speed common browser tasks; support for Web standards including XML 1.0, HTML 4.0, CSS 1.0, DOM 1.0, and more; portal-type features including Internet keywords and more; and support for so-called Web Accessories, which opens a new "window" to Web content providers.

While adding features, Microsoft is also aiming to simplify the browsing experience, in part by offering the new browser as a series of components rather than a monolithic whole. Perhaps most notably, a Java virtual machine is available as an add-on, not as part of the core browser.

For corporate users, Microsoft offers Internet Explorer Administration Kit 5.0, also released into beta Wednesday. The kit lets IT managers roll out consistent IE 5.0 implementations across the enterprise via a wizard-based user interface. Administrators can also add their own toolbar buttons and menu items.

Perhaps the most unique new feature is Web Accessories, which counters Netscape's Communicator-NetCenter integration with an approach that lets any content provider or portal site integrate content into IE 5.0.

Content providers building Web Accessories include Alexa Internet, Bloomberg Financial Markets, the MSN online service, and *The New York Times* on the Web.

For example, Bloomberg Financial Markets has

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For example, Bloomberg Financial Markets has used the Explorer Bar in IE 5.0 to offer up-to-the-minute stock quotes and financial news in a separate pane within the browser.

At least in concept, Web Accessories seem similar to IE 4.0 features, including Active Channels and Active Desktop components.

In addition to such add-ons, IE 5.0 offers additional browser-content integration via one-click home page customization, as well as the ability for search engines and Web mail providers to integrate with the browser and its toolbars.

Other new IE 5.0 features:

- A search assistant that taps into multiple search engines to return results;
- Refinements to IE 4.0 features such as adding and organizing favorites and viewing history;
- Refinements to the auto-completion of URLs. Rather than speeding ahead to finish a URL, the feature will offer a drop box with URL suggestions;
- Windows Synchronization Manager, which more seamlessly lets users move between offline and online browser usage;
- The ability to access Web-based e-mail as the default e-mail client on the browser.

The IE 5.0 beta is available on Windows 3.1, 95, 98, and NT, as well as Sun Solaris. Versions for Apple Macintosh and Hewlett-Packard's HP-UX will follow.

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New Internet Explorer tested

By Paul Festa
Staff Writer, CNET News.com
November 4, 1998, 10:20 a.m. PT

update Appearing to borrow a couple of pages from Netscape's playbook, Microsoft today released a beta version of its Internet Explorer browser that focuses on simplicity and integration with Web sites.

But beyond this apparent similarity, the companies' strategies diverge. While recent versions of Navigator are married to Netscape's own Web property, IE 5 is taking a little more promiscuous approach, inviting Web content providers to integrate their sites with IE and offering users an array of choices for search and navigation.

With the first public beta release of IE 5--the browser already has been previewed to Web developers and to hardware and software vendors--Microsoft is launching its "Internet Explorer Web Accessories" initiative. Under the Web Accessories program, portals and other content sites can build extensions to the browser interface to serve content continuously regardless of where the user surfs.

Appearing in a separate pane from the main browser window, these extensions can serve up content--and advertisements--without interruption. This feature could make IE 5 an invaluable tool for content providers eager to keep the definitionally jumpy eyeballs of Web surfers trained on their content and ads.

So far, Microsoft has signed on Alexa Internet, Bloomberg Financial Markets, The New York Times on the Web, and Microsoft's own MSN portal site to utilize the accessories extensions.

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Bloomberg (a content partner of CNET News.com) will use the feature to deliver up-to-the-minute stock quotes and financial news. MSN will provide access to MSN services and information including Web-based email, stock quotes, and news.

Another feature intended to bring IE 5 and portal and content sites closer together lets users change their home page in one step.

Netscape has been integrating Navigator with its Netcenter portal site in a variety of ways, resolving search requests to Netcenter search and directory pages, including a link to Netcenter's personalization feature on the Navigator toolbar, and making it easier for users to specify Netcenter as their home page.

IE 5 will present a selection of search options when users perform keyword searches from within the browser, offering choices of what kind of database to search (Web, newsgroup) as well as whose search engine to use.

With IE 5, the search button yields a separate pane that lists the various search options. Keyword searches will call up the browser's best-guess site in the browsing window and a list of searching options in the search pane. The search pane performs the same search in the various search engines with one click and without the user's having to re-enter the keyword.

Another focus of the IE 5 launch that recalls recent Navigator campaigns is ease-of-use.

With IE 5, Microsoft has incorporated into the browser a group of automation technologies, known as IntelliSense, that are already found in other Microsoft products including the Office suite, the Visual Basic tool, and Visual C++. IntelliSense will detect whether the computer is online or offline, extend autocompletion to more areas of browsing, and expand content-synchronization for offline browsing.

In one instance sure to raise the eyebrows, if not the hackles, of security mavens, when IE 5

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autocompletes a user name for a Web site, it automatically inserts the passwords. But in response to the security hazard such a feature raises, especially for computers with multiple users, computers that aren't physically secured, or computers that are lost or stolen, Microsoft points out that it can be disabled.

Further, address bar autocompletion is expanded in IE 5. When users type in a URL, a drop-down box appears with a list of recently accessed sites that match the first few characters entered. Users can navigate and choose from this list using the arrow keys. Autocompletion also works for plain-word named "Favorites" sites.

URLs entered with bad syntax are autocorrected in IE 5.

Other automation features let users synchronize email and cached Web content at set times for surfing offline. For example, an IE 5 user could set browser to update email and site content each time he or she logs off, or at a particular time of day.

Version 5.0, which in its minimal version does not support Java, will automatically detect when a site requires a Java Virtual Machine, and download it. The browser also will uninstall the JVM once it is no longer needed, in order to speed performance.

Version 5.0 provides better support than its predecessor for World Wide Web Consortium standards including Extensible Markup Language 1.0, Extensible Style Language, Cascading Style Sheets 1.0 and 2.0, the Document Object Model, most of HTML 4.0, and Microsoft's own proposal to the W3C called HTML Behaviors.

Adherence to W3C recommendations has been a thorn in the side of both Microsoft and Netscape, as developers agitate for more standards compliance. Yesterday, the Web Standards Project announced its report detailing the top ten problems IE 4 has with Cascading Style Sheets.

"We realize the next version of Internet Explorer is still in beta and hope that these problems will be fixed by the final release so that Explorer will be 100 percent compliant with CSS-1," said WSP project leader George Olsen in a statement. "Especially since Microsoft has been spending development time adding non-standard extensions to CSS in their beta releases so far."

Microsoft's director of Windows marketing, Yusuf Mehdi, defended the company's record on standards support.

"Since IE 3.0 we pledged to support Internet standards and our track record on IE3, IE4, and now IE5 demonstrates a number of things," he said. "We are the leader in implementing Internet standards and provide a significantly greater degree of support than any other browser vendor by a large margin.

"On CSS-1 we now have virtually 100 percent support for the standard in the IE 5 beta. We have pledged to not implement a proprietary approach when a W3C standard exists," Mehhi observed.

But Olsen today blasted the newly released beta's CSS support.

"I ran IE5 beta through the tests this morning and it still fails most of them, some quite badly." Olsen said.

The browser has played to enthusiastic beta testers so far, Mehdi added.

"More beta testers wanted to upgrade to IE 5 than to any other previous version," he said. "This was surprising because IE 4 had more new features."

Microsoft's focus groups demanded simplicity above all other qualities, according to Mehdi. To that end, Microsoft added one small feature aimed at novice users, a "Go" button, borrowed from America Online's interface. Place to the right of the address bar, the "Go" button is for users who don't know to hit return after typing an address.

Microsoft is working on a Mac version of the IE beta; today's release will be for the Win 32 and 16 platforms, as well as Unix (Sun Solaris). The Mac version may be released as a 4.5 version, depending on how quickly the new functionality can be incorporated, Mehdi said.

Microsoft expects to have a shipping version of IE 5 for all platforms except the Macintosh by next quarter.

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--BOOKS--
What's Hot
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THE NET NEVER FORGETS | PAGE 1, 2

Beyond the question of informed consent lie larger questions: Should all of this electronic flotsam and jetsam be archived in the first place? What are the consequences for us if our digital footprints survive indefinitely? Who should decide whether they do survive?

The answers are hardly comforting, especially for those given to strong displays of emotion or opinion online. "We're now entering an era where tens of millions of people are speaking on the record without any understanding of what it means to speak on the record, and that's certainly unprecedented," says David Sobel, general counsel for the Electronic Privacy Information Center in Washington. "It is suddenly becoming impossible to escape your past."

Your children and grandchildren not yet born will be able to reconstruct a record of your digital life -- not just the good stuff but also the best-forgotten postings to alt.sex.fish or rec.nude. The Web shrine you once erected to an old flame, with its hyperventilating vows of eternal devotion, may give pause to a new lover in your life. The union solidarity page you put up at your first job -- years before you were bucking for senior management -- may come back to haunt your efforts to get a promotion. And who would have predicted that your Senate candidacy would go down in flames when your political opponent uncovered the image-rich homage to

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BROWSE THE

porn star Ashlyn Gere you posted in college?

Most people don't have posterity in mind when they fire off notes or post Web pages. Observes Schneier: "When you're in college and posting things online, you're young and immortal and you don't think about the impact your words will have five minutes from now, much less five, 10 or 20 years down the road."

We can already see the outlines of this new world. When you apply for a job in the high-tech sector, there's a fair chance your prospective employer will use a search engine to scout out your online postings, from late-night musings to intemperate rants fired off to a political news group. Would an employer's decision be colored by information that has nothing to do with a candidate's job qualifications, such as your out-of-the-mainstream religious beliefs, sexual orientation, HIV status or personal habits? Absolutely, and without apology. After all, "character" counts, too.

Federal law makes it a crime for government agencies to compare most digital information about U.S. citizens, points out Fred Cate, a law professor at Indiana University and author of "Privacy in the Information Age." But nothing prevents private companies or individuals from doing so. Criminal convictions, driving records, property records and voter registration records might be available with a few keystrokes.

Should employers, neighbors and descendants not yet born be able to poke around in the digital attic for information about you?

Cate believes there are good reasons for us not to be overly concerned. "It's the democratizing of Big Brother, and that's not such a bad thing," he says. "You can find out as much about your boss as he can about you. I'm not really happy that someone down the hall can follow me and make a database about me, but that's the way it is in

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a database about me, but that's the way it is in the digital age. If your feelings get bruised, tough. If the information's true and not distorted, then you're stuck with the things you said online years ago. I don't see this as a privacy issue."

Perhaps not in the narrowest sense. But if every online expression becomes fodder for somebody's professional, personal or political agenda, clearly we lose certain freedoms of expression in the bargain. Do you really want to live next door to Big Brother, even a more democratic one?

Says Sobel: "If you define privacy as the right of individuals to control information about themselves, as we do, then mega-archiving systems clearly raise significant privacy issues. These systems convert every passing thought and contemporaneous musing into a permanent, retrievable record -- without, in many cases, the knowledge or consent of the creator."

Even Brewster Kahle, who founded the nonprofit Internet Archive and its commercial offshoot, Alexa Internet, says, "There are some tricky issues here. A lot of this material is public, but is it really meant to endure?"

What Kahle is doing is nothing less than astonishing. Alexa's 36 employees, working in a century-old building in San Francisco's Presidio, send out "spiders" to crawl the Web and Usenet and store the text, video and audio on a digital jukebox tape drive. It takes about two months to capture all 300 million-plus publicly accessible Web pages. So far they've scooped up 12 terabytes of content, or 12 trillion bytes.

Kahle says he launched his project because "we need to preserve our digital heritage. Unless we start saving it, every passing day we're losing the record of one of the great turning points in human history." His Internet Archive and Alexa

have drawn widespread praise from academics, historians and Net luminaries concerned that the Web's pioneer days may soon become irretrievably lost. For researchers and scholars, it's a field day. For the rest of us, it's a mixed blessing.

Sobel cites a letter he just received from a stockbroker who was distraught about a new database, compiled by the National Association of Security Dealers, profiling the backgrounds of stockbrokers nationwide. "He had a felony conviction 23 years ago, when he was in his 20s. And now that information is about to become searchable online for the first time. He thinks this is outrageous, and I tend to agree with him."

Individuals can't even prevent private indiscretions from winding up as part of the Internet's global voyeurism machine. "I just got a phone call from a distraught mother whose 16-year-old daughter's ex-boyfriend posted nude photos of her on the Web," Sobel says. "The photos were consensual when they were taken. So suddenly it's part of the public domain, and even if the mother persuades him to take them down, he may no longer have control over how long this stuff is out there. This teenage girl may have to live with that for the rest of her life."

Kahle offers another example: "The president's personal home page is probably in our archives now -- the person who'll become president in 20 or 30 years. You know that he or she is the kind of person who already has a Web page up in college."

Are we condemned, then, to a future where journalists will pore over every online college-age musing of a prospective president?

Sobel says, "We need a public debate to redefine the concepts of what should be private and public. Should anyone be able to type your name

into a search engine and come up with public records about your private life? What good are laws that expunge a crime from your record if the old records remain accessible to anyone on the Net? What about information that's misleading, inaccurate or that you had no idea was out there in cyberspace?"

Kahle is well aware of the debate, and he's working with legal experts, historians and privacy advocates to determine the best way to make archived material available. "I used to be very oriented toward privacy, trying to keep track of who knows what about me," he said. "I've become less fanatical about it, because I find that it's more valuable to be found than for me to be obscure. For those who don't want to be found, we should let them be."

But do we have that option anymore? As the Net becomes ubiquitous, its underlying essence of interconnectedness and community comes with a price: the loss of anonymity. We are being drawn forcibly, inexorably, into the global town square.

That is no reason to avoid the Internet (as if we could!). The Net is a gift, connecting us with like-minded individuals around the world, letting us interact in soul-stirring ways. But we need to be aware that our digital footprints are permanent ones: The Net has forgotten how to forget.

This can be both blessing and curse. For many of us, it would be marvelous for our grandchildren to summon up our very first home page. For others, whose online forays may not be the stuff of posterity, a gentle forgetfulness would be far kinder.

Once, words were spoken and vanished like vapor in the air; newsprint faded and turned to dust. Today, our pasts are becoming etched like

a tattoo into our digital skins.

SALON | Nov. 25, 1998

J.D. Lasica is a new media columnist for the American Journalism Review and the Industry Standard.

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Compute Your Own Web Traffic Rank

Jakob Nielsen's *Alertbox*, November 1, 1998

<!-- Sidebar to Jakob Nielsen's column:
Yahoo is good -->

Jakob Nielsen's AlertBox

As long as Yahoo remains the most popular site on the Web and continues to publish its traffic data in regular press releases, you have an easy way to calculate the popularity ranking of your own website: **where your site stands relative to the other sites on the Web**.

Web traffic follows a Zipf distribution, meaning that it has a few very large sites, a decent number of mid-sized sites, and a huge number of small sites. In general, the Zipf distribution says that traffic for the N'th most popular website will be

$$T = Y/N$$

(where T is the site's own traffic and Y is the traffic on the most popular site)

In other words, the Web's tenth most popular site will have 10% of Yahoo's traffic, site number 100 will have 1% of Yahoo's traffic, and so on down the line to site number three million which has 1/3,000,000 the traffic of Yahoo: about 48 page views per day, which sounds about right for one of the least popular sites.

Simple arithmetic makes it possible to change the traffic formula into a popularity formula:

$$N = Y/T$$

N = your site's popularity rank
Y = page views on the Web's most popular site
T = your site's traffic in page views

Yahoo's traffic in September 1998 was 144 million page views per day, or 1.01 billion page views per week. During that period, my own site, www.useit.com received 110,360 page views per week. Thus, the formula says that useit had a popularity rank of 1,008,000,000/110,360 = 9,134. Estimating useit to be approximately number 9,000 on the Web corresponds well with data from Alexa's Internet traffic measures which placed useit among the 10,000 sites with the most traffic.

In other words, data from your own server logs combined with freely available information from Yahoo's press releases are sufficient to give you a pretty good idea of how you rank relative to the other sites on the Web. People often pay thousands of dollars for this information, so you have saved a lot of money by reading the Alertbox today.

<!-- *Jakob Nielsen, Ph.D., is a principal in the Nielsen Norman Group and a monthly columnist on Web usability for DevHead.* -->

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Jakob Nielsen's monthly DevHead column.

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Bigfoot has portal-sized ambitions

By *Matthew Broersma* , ZDNN
November 5, 1998 6:14 PM PT
URL: http://www.zdnet.com/zdnn/stories/news/0,4586,2160867,00.html

Bigfoot International Inc. plans to release the newest version of its alternative browser interface, NeoPlanet, next week.

And to help supplement revenues from the free product, it's adopted the same model as seemingly every other Internet company that doesn't directly sell its products: that is, it's looking to become a portal. NeoPlanet is an add-on to the Internet Explorer browser, basically giving the browser a flashy interface and a few additional features; Bigfoot describes the product as making browsers as easy to use as America Online (NYSE:AOL).

"Microsoft and Netscape's browsers are getting to be basically alike, and they're not that much fun to use," said NeoPlanet Vice President and General Manager Drew Cohen. "They're focused on richer HTML, Javascript, and that sort of thing, because they're focused on enterprise sales, getting companies to buy their servers. We're focused on the consumers."

Cohen said users have downloaded 100,000 copies of NeoPlanet since its official launch in September, with 75,000 of those downloads coming last month.

A choice of interfaces
The new features in NeoPlanet 2.0 include a customizable interface that can make the browser look like an iMac, something out of Star Trek, or even a Goth gadget.

Users can also create "channels" -- collections of subject-oriented links that appear in the browser interface -- and trade them with other NeoPlanet users.

Have an opinion on this story? Add your comments to the bottom of this page.

But the most important features from Bigfoot's point of view might be those that turn the browser into a kind of client-based portal.

Portals are sites such as Yahoo! (Nasdaq:YHOO) and Netcenter that gather a slew of features into one place in order to attract users, which means they can sell advertising.

Bookmarks on steroids
"We think that's a great idea, but we say that we can do it on the client side, instead of all on the server side," said Cohen. "That way you can take advantage of the power of your machine, instead of waiting for a server to do it."

So, along with the fancy interface, users get a selection of preset content categories ("bookmarks on steroids," NeoPlanet calls them), an e-mail application, the What's Related tool from Alexa Internet, and other features.

NeoPlanet now automatically updates itself, so users will get new add-ons as they come out.

The channels include major sites, such as Amazon.com (Nasdaq:AMZN), that have partnered with Bigfoot to create special versions of their site for NeoPlanet users. Bigfoot, in New York, will receive a cut of advertising revenue or sales generated by NeoPlanet users.

Users needed

The main portions of the site are provided by portal Snap.com, a joint-venture between CNet Inc. and NBC.

Bigfoot itself updates some of the preprogrammed channels with current news and information, as an incentive for users to return often. If the company is able to attract users to Bigfoot-branded pages, it could generate an income from selling advertising, as portal sites do.

There's even a window in the browser where Bigfoot can display news and advertising.

Before the company can make a killing from ads, however, it will have to sign up a large user base. NeoPlanet's 100,000 downloads compares to about 27 million monthly users for the popular portal AOL.com, according to Media Metrix.

Post TalkBack

I have used IE4 since I first ... - *Lynn Hochwarz*

I have used Neoplanet for seve... - *David Fulbright*

I recently downloaded NeoPlane ... - *Bill Barnwell*

Neoplanet is so cool. It's sle... - *J. Roswell*

Wait. They want to make using... - *Anthony Forte*

Blech! This thing is nothing ... - *Hugh Jass*

BigFoot ought to be more up-fr... - *J A Carter*

Hey Bigfoot! See if Alexa ca... - *Guy Trotter*

NeoPlanet is extremely miss-le... - *David Mckee*

CWSApps Map

internet.com

Stroud's CWSApps

Site Map
What's New
Browse 32-bit
Browse 16-bit
Search for an App
What's Cool
Top 25 Apps
Index of Apps
Newsletter
Awards
Feedback
Advertising

isp news

Don't let the fast pace of technology leave you in the dust

Stroud's Reviews
Internet Agents

CWSApps Site Map

Internet Agents automate many routine and often time-consuming tasks, givi you more time to have fun surfing the 'net. Tasks handled include filtering an downloading web sites, alerting you when new products are available or whe web sites have been updated, automatically downloading product updates anc fixes, and much more. Various agents can even let you know when a web site been removed from the Internet or when one has been moved to a new locatic While 'net agents may not be the perfect panacea for keeping up with the con evolution of your favorite products and web sites, they do go a long way tow helping you stay as up to date as possible with the latest and greatest product that the 'net has to offer. As with the Web Accessories category, by concentra on what web browsers lack, the added value that Internet Agents bring to use will hopefully make navigating the web much easier and, of course, much mc fun.

The following are reviews for each application featured on the 16-bit and 32-Internet Agents pages. Additionally, you can add your own comments and discuss the clients reviewed here with other users in our online user conferen area. Each app has its own conferencing room which can be accessed by click on the individual *chat* icons below.

NetAttaché -- NetAttaché stakes its claim as being the Internet's preeminent second-generation web agent -- an agent above and beyond first-generation clients like WebWhacker, SmartMarks, and WebWatch. Does NetAttaché live up to its hype and thereby render obsolete the competition for the time being? The answer is a definitive yes. By integrating unique and powerful features that bring the web to your desktop at unprecedented speeds and with a minimum of effort, NetAttaché is indeed the consummate web agent. Like its predecessors, NetAttaché offers web site archival capabilities, personal spiders that automatically download web-related information for you, and routine comparison checks for notifying you when your favorite web sites have been updated. The initial innovation that distances NetAttaché from the competition is its filtering agent, which will automatically scan web sites and download only the information important to you. For example, NetAttaché will, at scheduled intervals, check a web site for revised information. Any new information that meets your needs is then downloaded and presented to you in the form of a news brief when you run the client. The key feature here is NetAttaché's ability to identify differences on Web pages and then filter through to you only the information that you deem critical. Another of

Alexa -- With v4.5 of Communicator, Netscape has added several beneficial new features collectively called Smart Browsing, the most useful addition being the "What's Related" drop-down listing of Web sites that are similar in topic to the one in the browser window. What most users don't realize is that this technology has been around for several years in the form of Alexa, an ad-supported freeware Internet Agent that delivers a list of related links for Web sites as well as a multitude of useful features that you won't find in any browser currently available.

Alexa occupies a small area of your Web browser screen either as a small (45 pixels in height) horizontal bar or a variable-width vertical bar. The agent offers four informative panels with extensive data about the site currently being viewed. The default Snapshot panel provides an overview of the site with summarized information from each of the other three more specialized panels. The Snapshot panel also includes news and financial information from NewsReal and a quick search button for searching the eBlast Internet Guide, the online Mirriam-Webster Dictionary and Thesaurus, and Encyclopaedia Brittanica Online.

In addition to the Snapshot panel, three specialized panels are available for viewing. A Site Stats panel displays statistics on the current site including popularity (traffic), freshness (a measure of how current the site's information is), and performance ratings; the number of different Web pages that link to the current Web site; the total number of pages contained within the site; and any reviews or awards the site has received. The stats panel also allows you to read user-submitted reviews about the site or add your own review.

The Related Links panel is similar to the "What's Related" feature in Communicator v4.5 in that it suggests sites to visit that are similar to the site currently being viewed. In fact, Alexa is most likely the inspiration behind Netscape's Smart Browsing technology. The Related Links panel offers an efficient and reliable way of viewing related sites that you won't find with most search engines. The best use of the information in this panel is for exploring a variety of sites and then picking the one best suited to your needs.

The last specialized panel is a Site Registration panel with information that is mostly beneficial to only business and corporate users. You can access this panel for the name and contact information of the site's registered owner. Contact information includes a phone number, street address, and even maps and directions to the contact address. Like the other three panels, the Site Registration panel can also be enlarged to a full screen Web view for more extensive data and additional explanations for the information.

Alexa can be downloaded as an ActiveX Control for Internet Explorer v4.0/5.0 or as a regular download for Netscape (all versions) or Internet Explorer 3.0. The ActiveX Control is now in beta release as version 3.0 and offers a much cleaner, more attractive interface than previous versions. If you're a regular user of Internet Explorer 4.0 or later, this is definitely the version to download. If you're not, the benefits of Alexa v3.0 might be enough to win you over to IE. The Netscape/IE 3.0 regular download (currently at v1.4.1) offers an amateurish interface and lacks much of the critical information found in the 3.0 release. It also lacks the ability to be viewed vertically. On the positive side, it can be moved around the browser screen for optimal placement.

Overall, Alexa serves as an extremely beneficial tool for net newbies and net experts alike that offers a great deal of information that can't be found anywhere else. While the Related Links feature has been imitated by the latest release of Netscape, Internet Explorer still lacks this information, making IE and Alexa a perfect match. If you can spare the desktop space (Alexa's only real drawback), Alexa makes for a must-have download.

Pros: Offers a variety of Web-related information unavailable elsewhere, extremely useful Related Links panel
Cons: Takes up valuable desktop space, Netscape/IE3 release far less impressive and less useful

New in v3.0: Only available for Internet Explorer 4.0 or later, entirely revised interface (more information and much more attractive), integrated business news information from NewsReal, vertical placement option (in Internet Explorer sidebar area); Release Notes

Version Reviewed: *3.0.0.2 Beta Release*
Date of Review: 10/13/98



Add your own comments in our online user conferencing area

Go Ahead Got It! -- Got It! from Go Ahead Software is an intelligent agent that takes web caching to the next level. The client monitors the web sites you visit most often and maintains a cache of those sites that Got It! predicts you are most likely to access again in the future. Got It! dramatically accelerates your web experience by working in the background to download pages to its local cache on a scheduled basis. As a result, the pages are already available for you the next time you access them. The Got It! client is composed of three major elements, each of which focuses on accelerating a different area of your web surfing experience.

The first major tool is the *Predictor*, a read-ahead caching utility that not only tracks which sites you access most often but also downloads additional links from a web page in the background so that these pages will be available when you click on them. The second utility, the *Pruner*, uses an advanced algorithm to determine the frequency of how often you access a given page and how often the page's content changes. The algorithm assigns an index of relative importance to each page and then uses this index to remove the least valuable information from the Got It! cache. This minimizes the need for a large amount of hard drive space while still ensuring the fastest possible performance for those web sites you're most likely to access.

The final piece of technology behind Got It! is the *Fetcher* which scans your favorite sites and automatically updates your local cache when the information for one of these sites changes. This is all done in the background while you work on other tasks. Then the next time you go to check a web site out its information is already available for you from your hard drive. This way you don't even have to access the web to view the updated site. Got It! also notifies you when a site has been updated with new information. The only real drawback to Got It! is that even non-content changes like updated ad banners will cause the Fetcher to download a page, so in some cases you will be notified about an update when the actual information for a site remains the same. Overall though, with its intelligent caching capabilities and advanced filtering algorithms, Go Ahead Go It! is definitely one of the best web accelerators currently available.

Measuring the pulse of the Web

Among the interesting items that crossed our desk in the past few weeks were these statistics, provided by various sources.

Growth of the Net

Alexa Internet, which has been attempting to archive the Web for the past two years, released a few statistics in late August:

8 months	The rate at which the Web is doubling in size
3 terabytes	The size of Alexa's snapshot of the Web
900	The number of sites that account for 50% of the Web's traffic

Shopping on the Web

"In 1998, travel surpassed software as the number-one item for which adults shop online, marking the transition from an Internet audience dominated by technology early adopters to an audience comprised largely of everyday consumers and business people."—Cyber Dialogue

30 million	Cyber Dialogue's estimate of the number of Americans who shopped online between July 1997 and July 1998
30%	Nicholas Lippis's estimate (nearly $1.5 trillion) of the percentage of the U.S. gross domestic product that will be paid for online in 2002
51%	Percentage of people answering an @dtech/Talk City survey that said the Internet has in some ways changed the way they shop
50	Number of retailers on the MSN Shopping area of msn.com in November 1998

ASP and IE take hold

Two years ago when Microsoft started bundling its IAS Web server with NT, it was apparent that over time IAS would gain market share at the expense of Netscape and Unix vendors. But what is really interesting is the rise of ASP (Active Server Pages) as a platform for dynamic publishing. Here are a few stats provided at Internet World by Chilisoft, the leading supplier of ASP technology that runs on additional Web servers and operating systems.

300	Number of software vendors supporting ASP in their products
23,000	Number of public Web sites based on ASP
250,000	Number of ASP developers worldwide

And, finally, last month IDC reported that its latest browser study found that Microsoft's Internet Explorer, if you include its licenses to America Online, passed Netscape in market share in mid-1998, and Netscape's share fell below 50% for the first time.

FILTER
War room for the ad exec —p17
Raising a dead Web —p18
Yes, you can take it with you —p20

Filling the Urge to Merge

You're running a struggling Internet startup with a vision that's too big to let die. But you're too puny to attract the eye of serious venture capitalists. You've got six months before payroll runs out. What to do?

This scenario is what drove Bob Brauns, a former investment banker at Lazard Frères and Merrill Lynch, to create M&A Marketplace, a new online angel for small and struggling companies that are looking for a sugar daddy. For a $40 three-month membership, hungry entrepreneurs can list their own company as a firm to be bought, or search M&A Marketplace's databases to find thousands of companies for sale. If you know what you want and you're on the prowl, a "smart agent" can search the databases each day and send you new listings (and bulletin board messages) that match your criteria.

www.mergernetwork.com

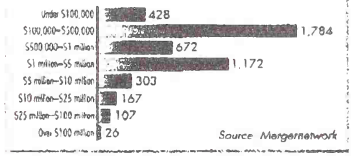
Most of the companies up for sale are in the $100,000 to $500,000 range, but a few gems with price tags of more than $100 million are also listed. While many listings come from brokers, some are put up directly by owners who want to avoid investment-banking fees (flipside: Employees and customers may know you're on the block and bail out).

The actual mergers and acquisition processes are broken down into friendly explanations by professional advisors, reached directly through the site, making mergernetwork.com a one-stop resource for budding takeover targets.

A headline service featuring the latest on venture capital, corporate investment, and restructuring news adds to the information mix and rounds out the offerings to make M&A Marketplace the first financial portal of its kind. Mergernetwork.com expects revenues of $300,000 this year. It won't put Wall Street out of business, but in the long run it could give the fat cats a run for their money.

Related: "Rent-A-CEO," p34.

On the Block at Mergernetwork
(Number of companies available and their annual sales.)



Source: Mergernetwork

Lights! Camera! Egos!

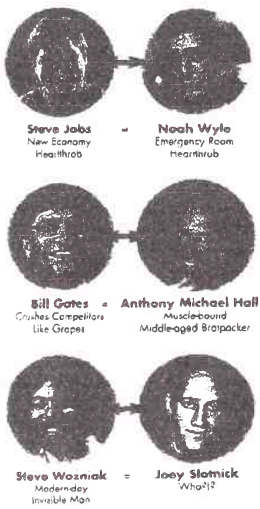
Swashbuckling adventure isn't limited to the high seas—or so goes the theme that runs through *Pirates of Silicon Valley*, a two-hour film that begins shooting in October for the TNT cable network. The movie recounts the cannon fire between Apple Computer and Microsoft in each firm's bid for greatness.

In trying to cast two company founders, each of whom thinks he's God, the producers of *Pirates of Silicon Valley* tapped *ER* heartthrob Noah Wyle as Steve Jobs and former comedy bratpacker Anthony Michael Hall as Bill Gates. Joey Slotnick is Apple's cuddly-bearish co-founder, Steve Wozniak. But their cinematic portrayal may be judged against another buccaneer's past and future efforts. Author Robert X. Cringely, whose book *Accidental Empires* and PBS series *Triumph of the Nerds* both chronicled Silicon Valley's epic battle of egos, is in preproduction for his own cable-ready account.

Cringely and the producers of *Pirates* have already exchanged broadsides. "My producers heard that TNT was going to call it *Triumph of the Geeks*," says Cringely, whose rival film will appear on f/x, the Fox cable network, sometime after *Pirates* premieres next year. "That's when the lawyers had to step in."

In casting the Valley's mythic corsairs, Cringely also has some quibbles with choices made by *Pirates*: "Doesn't that guy have too many muscles to play Gates?"

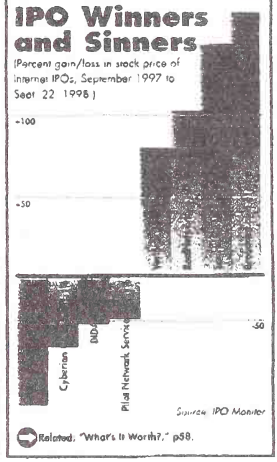
Related: A-List "The Nerds Next Door," p25.



Insane Stats

IPO Winners and Sinners

(Percent gain/loss in stock price of Internet IPOs, September 1997 to Sept. 22, 1998.)



Source: IPO Monitor

Related: "What's It Worth?," p58.

ANGELA GUNN

D O T.D O T.D O T.C O M



May I Recommend...?

WHY I DON'T LIKE WEB SERVICES THAT TELL ME WHAT I'LL LIKE

If everyone else online jumped off a cliff, would you?

In the endless conga line of Web "innovations," one of the latest—collaborative filtering—may actually make life better for the average Net user. Trouble is, it may not make life better for *you*.

The idea behind c-filtering is that you help your fellow Net users find good stuff online, based on the online stuff you've already found to be good. Some people call it "automated word of mouth," and it works like this: Say you're a fan of both the Beatles and the Rolling Stones, and you reveal this to a c-filtering music site by answering a few questions (although, more insidiously, the site may "deduce" this on its own from your buying history). The next Netter to come along looking into the Beatles will be told, "Hey, you might want to try the Rolling Stones."

Of course, experts have been recommending Net content since before Jerry Yang and David Filo decided that categorizing Web sites was cooler than writing dissertations. But c-filtering is different. It's *you* at work. Or, rather, it's *y'all* at work: Everyone who uses a c-filtering site becomes a part of the c-filtering process. The more, the merrier.

Or is it? I'm an unwilling participant in the c-filtering process at a certain bookselling site, and I don't think you should trust this stuff. For three reasons.

[1] *"Facts" lie.* At that bookselling site, I'm greeted by a "personalized" list of recommendations that, personally, I have no use for: Hemingway, a text on writing screenplays, true-crime paperbacks. These suggestions do reflect some of my previous purchases, but for all the wrong reasons.

Someone from my hometown wrote the screenplay book I bought a few months back; I'm not wanting another. The true-crime stuff I ordered in a fit of flu-driven restlessness. I don't think I ever read any of it. And Hemingway? Got *my* fill of Papa in high school; that was a gift for a friend.

And the c-filter misses plenty. I rely on the site for finding out-of-print tomes; those purchases aren't reflected. Worse, there's no way of getting the system to reflect my current enthusiasms (architecture, urban planning, maritime history) without my first buying books on those topics. I can't erase my purchasing past, I can't explain why I made the choices I did, and I don't seem to have the option of developing new interests.

[2] *I'm lazy.* One of the things that's supposed to make c-filtering work well is, well, *work*: You're supposed to tell the site what you do and don't like, which is a fun way to kill 10 minutes. But as a lifetime project? I've rated music at **FIREFLY** [www.firefly.net], films at **MOVIE CRITIC** [www.movicritic.com], Web sites at **ALEXA** [www.alexa.com], and (yes) books at you-know-where. Once each. Am I going to trot back and tweak those opinions when the Richard Thompson album I originally felt so-so about improves on repeated listening, or when the Hofstadter book I craved falls short?

Some systems try to correct for user laziness. **DIRECT HIT** [www.directhit.com], which supplies the c-filter for **HOTBOT** [www.hotbot.com], won't count your click on a search-result link as a "vote" for that site's relevance unless you click elsewhere on the linked page. That means *they're watching what you do.* Yikes! I was impressed with the results but uncomfortable with the intrusion, despite the company's claims that I'm anonymous to it.

[3] *You deserve better.* Ask any sociologist. Crowds are both stampedable and deeply conservative. The glory of the Web is that any individual can offer an opinion and have it judged against those of the "experts." That's worlds away from c-filtering by *masses* of individuals.

When I want a book recommendation, I may not turn to the *The New York Times Book Review*, but I also don't take a poll of strangers on the street. What I want is a friendly and knowledgeable clerk. In their rush to provide cool yet cost-effective Web content, c-filtering sites are hoping you don't notice that their recommendations are to "real" book or movie or music advice as a McDonald's Value Meal is to a burger flame-broiled on your patio.

I CAN'T ERASE MY PURCHASING PAST, I CAN'T EXPLAIN WHY I MADE THE CHOICES I DID, AND I DON'T SEEM TO HAVE THE OPTION OF DEVELOPING NEW INTERESTS

I *like* the Web's craziness. Sure, I occasionally get led astray by a search that didn't go quite as planned, but often I discover something new or fascinating, or happen upon a point of view I hadn't considered. C-filtering whittles away that experience—good for Progress (and an interesting tool for those who would practice Web filtering on sex or hate sites [see page 92]), but bad for the serendipity that expands minds.

Serendipity isn't about following the pack; it's about breaking away. And wasn't the chance to follow your own path why you, a decidedly above-average Net user, got online in the first place?

CC: BY TOM KEATING

File Edit View Insert Format Tools Compose Help

Times 10

To: CTI Subscribers

Cc: 3Com, Alexa, Cisco, GRIC Communications, iPass, MCK Communications, Mustang Software, Teltone, TransNexus

Subject: Call Center Agent Meets Agent 007

What is the ultimate prize for the competitive call center? Customer loyalty. Indeed, the call center, in its mission to win loyalty, exercises technical resources and persuasive powers with such aplomb that even so expert a gadgeteer and persuader as James Bond would be impressed.

Why bring up James Bond in a discussion of call center technology? The parallels are more telling than you might guess. For example, the call center agent, like the secret agent, is often "out in the cold," performing solo in hostile territory, attempting to win over any possible allies, one person at a time. Granted, call center agents attempt to win over customers, whereas James Bond attempts to win over informants, but the overall dynamic is much the same.

Moreover, call center agents and secret agents both do a lot of dirty work, and not for any recognition, mind you. They are, by and large, unsung heroes, whether they work on behalf of a corporation (which is the case with call center agents) or a government (which is the case with secret agents). It seems the least we could do is provide them the equipment they need to get their jobs done as expeditiously as possible.

Whether we are talking about call center agents or secret agents, the most critical equipment is communications gear, particularly the gear they use to win over their "sources." In the case of call center agents, this gear must facilitate the agent/customer interaction by accommodating the customer, by allowing the customer to communicate with the agent by whatever means the customer prefers. And, increasingly, customers are looking for ways to communicate via the Internet and the World Wide Web — which explains why many call centers are working to communicate with customers via e-mail, Internet telephony, and Web callback.

BRIEFINGS AND DEBRIEFINGS

Before we concentrate our attention on the front lines, that is, on customer/agent interactions, we should take a quick look at some of the mechanics of intelligence handling, call center style. Basically, intelligence handling in call centers is a matter of interacting with databases.

Call center agents interact with databases in various ways. Perhaps the simplest way is via good old data entry, a form of debriefing, if you will. On the briefing side of things, call center agents may access the information they need "on the fly," via screen pops.

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Screen pops improve customer service and efficiency by quickly pulling up a customer's record, which may include a complete history (dossier?), onto the agent's screen. Screen pops reduce agent error, and save time for the agent, who doesn't need to type the caller's name or customer number to query the database. Over a span of hundreds or thousands of calls, phone charges may be substantially reduced.

Customers may interact with databases as well, without agent intervention. For example, a customer can take advantage of interactive voice response (IVR) to provide the information the call center needs to route calls or retrieve data, and to do so automatically. Similarly, fax-on-demand automates the faxing of common documents, thereby freeing agents to perform other, more complex tasks.

THE MISSION

For the secret agent in the field or for the call center agent in the marketplace, the main challenge is to win over people who are indifferent (at best) or who may even be hostile (at worst). Who, do you suppose, has an easier time of it, James Bond or the average call center agent? All things considered, I'd say Bond has it much easier.

Bond merely enacts a Hollywood fantasy, seducing gorgeous, willing women. Since Bond's entire world is a Hollywood creation, he invariably succeeds. The call center agent, however, lives in the real world. The call center agent encounters the real Dr. No's, and must somehow convince them to become Dr. Yes's.

NOT ENTIRELY OUT IN THE COLD

Fortunately, many call center agents have the benefit of managerial and technological support. One manifestation of managerial support is workforce management software, which has grown tremendously in sophistication thanks to the continuing maturity of the CTI industry and the development of several third-party CTI solutions. (See the article in this issue by Chris Donner. Chris's article is entitled *What You Might Overlook When Deploying Workforce Management Software*.)

The new workflow management systems are much more powerful and user-friendly than their old terminal emulation counterparts, but they are also more complex, requiring intelligent and well-trained agents. Developing such agents, and establishing effective working relationships with them, is a challenge that Bond's handler, M, would have found familiar. (While M was often exasperated by the irreverent, irrepressible Bond, he also valued Bond's resourcefulness, which might have suffered had Bond been subjected to an excess of discipline.)

So much for managerial support. What about the technological side? Well, it would be hard to say who was the better equipped — Bond, who has the benefit of Q's gadgets, or the call center agent, who has access to all manner of communications gear.

Granted, James Bond travels the world in exotic cars, which might, at the press of a button, erupt with hood-mounted rockets or spew forth oil slicks — all of which looks terribly exciting, especially in contrast to a sedentary call center agent. There are, however, CTI solutions that create "virtual agents," that is, agents who are free to move from location to location. Such solutions include MCK's EXTender and Teltone's OfficeLink 2000.

Further, in the old James Bond movies, tracing a villain's phone number took several minutes, and the vil-



There is no better place to educate yourself on the latest CTI solutions in the call center than at CTI™ EXPO! Next month, in San Jose, CTI™ EXPO will feature special call center tracks in the conference program and several call center companies on the show floor. I will be there investigating the latest trends and advances in call center technology, and you should be there too. For more information, call 877-4-CTI-EXPO or visit the CTI™ EXPO Web site at www.ctiexpo.com.

Exhibitors presenting call center technology at the show include:

- ACCESS!
- Acxiom Corporation
- ALeSys
- ALTech
- Aptex Software
- Artisoft, Inc.
- Aspect Telecommunications
- AT&T International Call Centers
- AT&T Language Line
- AVT Corporation
- Blue Pumpkin Software, Inc.
- Buffalo International
- CelliT
- Comdial Corporation
- CommuniTech, Inc.
- Database Systems
- Davox Corporation
- Dictaphone Corporation
- EasyPhone
- EIS International
- Exacom
- Eyretel, Inc.
- Genesys Telecommunications Laboratories, Inc.
- IBM Corporation
- ICT Group
- IMA
- Interactive Intelligence
- Interior Concepts
- Lucent Technologies Computer Telephony Products
- Melita International
- Mosaix, Inc.
- Mustang Software
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- Nortel Enterprise Networks
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FROM : ANTENNA GROUP PHONE NO. : 415 896 1094 Nov. 11 1998 10:28AM P7

Jul 21 2nd Display Ads Shown Without Text Confirmation

Without CTI, the call center might spend a fortune on technology, yet fail to improve operations or move any closer toward accomplishing business goals.

lain usually hung up just before Bond traced the call. Today's call center agents not only know the caller's phone number, but the caller's name, buying habits, last purchase, social security number, birth date, mother's maiden name, address, and other vital information — all in less than a few seconds!

And that's not all. Call center agents may be equipped with hands-free headsets (with echo cancellation), ergonomic furniture, and video cameras. You might say this technology corresponds with Bond's miniature wiretap (bug), aerodynamic sports vehicles, and miniature hidden cameras. Finally, Bond may have had the ability to remotely control miniature planes from a short distance, but call center agents can actually push Web pages to a customer across the globe and control what the customer is seeing.

BEYOND GADGETS

While it has been fun playing with the James Bond analogy (at least for me), it's time to get serious. A successful call center, no less than a successful intelligence operation, has to do more than dabble with a lot of fancy gadgets. A call center has to integrate all the technological bits and pieces into a coherent, workable whole.

What really enables the call center is CTI. Without CTI, the call center might spend a fortune on technology, yet fail to improve operations or move any closer toward accomplishing business goals. Without CTI, technology investments might even signal waste and disarray, of the sort

- Spectrum Corporation
- Switchview
- Symon Communications
- Syntellect, Inc.
- TelAthena Systems
- TeleDirect International, Inc.
- Thomas & Betts
- TruePoint
- Willow CSN
- xPECT Technologies

INDUSTRY LEADERS ADVANCE INTERNET TELEPHONY STANDARD

Industry leaders 3Com Corporation, Cisco, GRIC Communications, iPass, and TransNexus have teamed up to promote interdomain authentication, authorization, and accounting standards for Internet telephony through the Open Settlement Protocol (OSP). OSP allows a clearinghouse to provide call routing and authorization between carriers. In addition, OSP provides usage reporting through call detail records. Without OSP, there is no open standard solution to perform these functions.

In addition to the overwhelming support of these industry leaders, OSP has been defined within the European Telecommunications Standards Institute's (ETSI) project TIPHON, chartered to establish global standards for Internet telephony.

Major benefits of OSP include:

- Confidentiality of all information through Secure Sockets Layer (SSL) encryption.
- Secure, mutual authentication of communicating parties.
- Non-repudiation of all communications through digital signature technology.
- Support for operation through existing firewalls.
- Flexible and feature-rich information exchange via eXtensible Markup Language (XML). ■

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REPORT FUTURE



in gear

TAL[illegible]T

For years, on th[illegible]ave used portable tape recorders to keep track of their ideas. Trouble is, passing those ideas along—in a letter, a memo, or an email—usually means asking someone to transcribe your tapes. The **Olympus D1000 Digital Voice Recorder** eliminates that hassle. It works with IBM's ViaVoice Gold speech-recognition software. The recorder's 2-MB flash-memory card captures about 15 minutes of speech. You transfer the memory card from the recorder to your PC, activate ViaVoice—and your brain doodles become computer documents. Warning: It takes time for ViaVoice to learn specialized jargon. But the software comes with a built-in vocabulary of 22,000 words, and it learns fast.

The Olympus D1000 costs $299 (ViaVoice included). Additional 2-MB memory cards sell for $49; 4-MB cards cost $99. Contact Olympus America Inc. via telephone (800-622-6372) or the Web (www.olympus.com).

HEATH ROW

ROADWARRIOR

Beef, chicken, or lactose-intolerant? You don't have to fly first-class to eat reasonably well on a plane—if you know what to ask for. Airlines offer special meals for vegetarians, diabetics, Hindus, Muslims—all kinds of fliers with dietary restrictions. We've collected menus from six major airlines. (Options and individual menus may vary.) So next time you make flight reservations, don't forget to reserve a special meal. HEATH ROW

AIRLINE	MOT*	SPECIAL MEALS	TASTER'S CHOICE
America West Airlines	24 hours	9 total: Baby's, Child's, Diabetic, Fruit Plate, Kosher, Low Calorie, Low Cholesterol, Low Sodium, Vegetarian	The vegetarian dinner includes pasta salad, carrot sticks, broccoli, cauliflower, strawberries, pineapple, and melba toast.
Delta Air Lines	24 hours	19 total: Asian, Baby's, Bland, Child's, Diabetic, Fruit, Gluten-Free, Hindu, Kosher, Low Calorie, Low Cholesterol/Fat, Low Sodium (no salt), Muslim, Passover, Seafood (cold), Seafood (hot), Toddler's, Vegetarian (dairy and eggs), Vegetarian (no dairy or eggs)	One of the Muslim meals offers baked sea bass, broccoli florets, pineapple butter, and herbed corn cake.
US Airways	6 hours *Minimum Order Time	22 total: Including Asian Vegetarian, Baby's/Infant's, Bland, Child's, Diabetic, Fruit Plate, Gluten-Free, High Fiber, Hindu, Muslim, Non-Lactose, Kosher, Low Calorie, Low Fat/Cholesterol, Low Protein, Low Purine, Low Sodium, Oriental, Raw Vegetarian, Seafood	The cold seafood entrée features tuna *nicoise*, grapes, and crackers.



FAST FACTS

PUBLISH OR PERISH?

Web Publishing

1.5 million
OF NEW WEB PAGES PER DAY

150%
ANNUAL GROWTH RATE

20 million
TOTAL # OF WEB "CONTENT AREAS"

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186
OF NEW BOOKS PER DAY

10%
ANNUAL GROWTH RATE

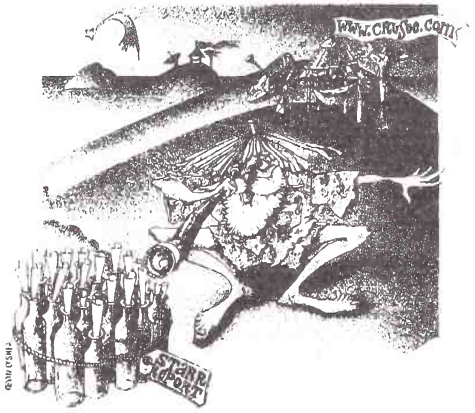
1.4 million
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*DATA AS OF AUGUST 1998
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SUNEXPERT MAGAZINE
Brookline, MA
Circ - 82 300
Monthly
NOVEMBER 1998
Bacon's

Datagrams

by John S. Quarterman



Starr Day

As most of you (unless you live in a cave) are aware, on Friday, September 11, (aka Starr Day) the U.S. House of Representatives released Independent Counsel Kenneth Starr's report about President Clinton. The report was released via the Internet before it was released through traditional news media. News agencies like Agence France Presse and CNN speculated that this would cause the collapse of the Net. The Internet did not collapse. It, and probably you as well, are not surprised by this prediction or result; see "Imminent Death of the Internet?" (column I wrote in 1996 (http://www.mids.org/mn/506/death.html). Some parts of the Internet were affected by this media event, but its nature is such that even if a segment goes down—as was the case following the Loma Prieta and Northridge earthquakes, or when someone with a backhoe cuts a line or a falling tree severs a cable, other connections come into play and traffic is routed around the damaged area.

Nonetheless, this case raises some interesting issues. First, let's examine what effect Starr Day actually had on the Internet.

The Data

My company, Matrix Information & Directory Services Inc. (MIDS), collects data concerning the overall performance of the Internet, as those of you who are familiar with *MIDS Internet Weather Report* (http://www.mids.org/weather/), or the new *Matrix Internet Quality IQ* (http://www.matrix.net/), are aware. To examine Starr Day, we will use data collected at our longstanding San Francisco-based beacon (courtesy of Alex Internet, http://www.alex.com/) on Friday, September 11, the day the report was released, and on the preceding Friday, September 4 (see Figure 1).

The data shown here represents the median—the average favored by Internet performance researchers for this type of data—across all scans collected that day from a set of approximately 650 Web servers scattered around the Internet. The averages are of latency, or round-trip time from our beacon to the destination nodes, for ping (ICMP ECHO), as indicated by the left index (in milliseconds).

We also compute various other "measures of central tendency," such as the arithmetic average, and descriptive statistics, such as the first quartile (Q1), third quartile (Q3) and standard deviation. These metrics, especially Q1, indicate that the data for these days are not perturbed by local effects in the vicinity of the beacon or its network connection.

The Spike

While Friday, September 4, shows a peak in the morning, tapering off in the afternoon and evening, Starr Day shows a tremendous peak at 3 p.m. EDT (12 p.m. PDT). The report was "officially" released at 2:30 p.m. EDT (11:30 a.m. PDT). Of course, we cannot say for sure that this spike in Internet Web server latencies was caused by the release of the report because, for example, there could have been some other popular information

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CTI Trends 2

Microsoft Releases IE 5 Beta

By Connie Guglielmo
November 4, 1998 10:16 AM ET

Microsoft Corp. released the first public beta version of Internet Explorer 5.0 today, an update to its browser that adds a collection of technologies it said is designed to automate and simplify browsing.

The company also announced that IE 5.0 will support what it said is an "open, componentized platform" that content and portal services can tap into to create "Web accessories," in the form of a toolbar, that extends the browser's functionality while seamlessly integrated into the IE 5.0 interface. Four companies have already signed on to provide accessory add-ons to the browser: Alexa Internet, Bloomberg Financial Markets, Microsoft's MSN online service and *The New York Times*. Bloomberg said it will use the Explorer bar architecture to give users up-to-the-minute stock quotes and financial news they can view within a separate pane within the browser as they continue to browse the Web.

Available for free download off Microsoft's site, IE 5.0 includes IntelliSense, a package of technologies the company first released for its Office suite of productivity applications. Among those technologies: a new Search Assistant that speeds and optimizes searches by automatically choosing which search engine is best able to deliver targeted results based on the user's search criteria. IE 5.0 also includes an expanded AutoComplete feature that now automatically completes online forms and fills in passwords and an AutoCorrect feature that fixes common typing mistakes within URLs.

"A lot of users don't know that Yahoo! [Inc.], for instance, is a great place to look for Web sites while HotBot offers lots of technical information," said Mike Nichols, product manager for IE 5.0. "With 70 million or more users now on the Internet, access to the Web is no longer the issue. The issue really is that once you get on the Web, it's way too hard to do what you want to do and it takes you too much time. That's what we tried to address with Intellisense and the new Explorer bars."

Microsoft has not yet set a ship date for the final release of the browser, according to Nichols.

Today's Top News
Updated November 16, 1998 3:43 PM ET

- Testimony Focuses On Browser Share
- Compaq Goes For A Home Run
- CDNow, N2K Rise
- Network Solutions CEO Leaves
- Who Will Steal The Comdex Show?
- Digital TV Still A Bit Fuzzy
- Free Services Boost E-Mail
- New Angle For VPN: Fast Access
- Arbitron Takes It To The Web
- Cloudscape Targets Connections
- Gates Dodges Questions
- Cincinnati Bell's Broadband Boom
- Pricing Pressure Drives Discounts
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Microsoft's Internet Explorer can be reached at www.microsoft.com/ie/

Related Stories

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- Microsoft releasing beta of Internet Explorer 5.0
- Microsoft Readies A 'Simpler' Internet Explorer 5.0
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Return-Path: <staff-request@alexa.com>
X-Sender: dia@206.132.57.10
Date: Wed, 04 Nov 1998 12:12:44 -0800
To: staff@alexa.com
From: dia@alexa.com (Dia Cheney)
Subject: Alexa mentioned in today's WSJ article on MSIE 5

November 4, 1998
Tech Center

Microsoft Drops 'Channels' In New Version of Explorer

By DAVID BANK
Staff Reporter of THE WALL STREET JOURNAL

Microsoft Corp. is expected Wednesday to release a preview version of its new Web-browsing software that includes features to simplify surfing and searching the Web but drops the unpopular TV-style "channels" from the previous release.

The new software, Internet Explorer 5, continues Microsoft's fierce competition with Netscape Communications Corp. for dominance in Web software. Netscape recently released a new version of its Web browser and is expected to discuss its plans to release a major upgrade early next year. The final version of Microsoft's new software is expected to be ready in the first quarter of 1999.

Microsoft executives said the new browser responds to customer complaints that the Web software had become too complex and required too many steps to accomplish common tasks. Microsoft will make use of its "Intellisense" technology, already used in its word-processing software, to anticipate what users want to do.

The "channel bar" and "Active Desktop" features of Internet Explorer, which highlighted Microsoft media partners such as Walt Disney Co., will be dropped from the new release. But the browser incorporates new features designed to attract Web publishers and service providers. Microsoft said Bloomberg Financial Markets, the New York Times, Alexa Internet and Microsoft's own MSN online service would make available "toolbars" customized for the new browser.

Separately, Tuesday Microsoft unveiled a new version of its Windows NT operating system for so-called embedded applications in industrial-control devices such as automated-teller machines. The new embedded version of Windows NT 4.0, which typically is used in powerful personal-computer networks, represents a new thrust by the software giant to expand into areas outside personal computers.

John Frederiksen, a group manager at Microsoft, said the heavy-duty product fills a niche that other Microsoft operating systems, such as its Windows CE, can't fulfill. For instance, bank ATMs often require air-tight security measures that are part of the NT operating system.

-- Dean Takahashi contributed to this article.

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Book Review:

Rebels in Law: Voices in History of Black Women Lawyers
Edited by J. Clay Smith Jr.

Mr. Smith has done a masterful job of chronicling leading black women lawyers from the late 1800s to the present. The collection of writings for this book were extracted from various sources, including law review articles, newspapers, bar association journals, books, unpublished documents retrieved through extensive research and a few original publications for this treatise.

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Legal Research:

West's Pagination System Not Entitled to Protection
The New York Law Journal

Contradicting the only other circuit to have considered the issue, a split federal appeals panel in New York has ruled that West Publishing Co., the nation's largest legal publisher, has no copyright protection for the pagination system it uses in its case reporters.

Access to Independent Counsel's Report on President Clinton

SITE CHECK:

Alexa: Researchers frustrated by the Web's lack of permanence will find that the Alexa site offers a useful tool for locating information archived online.

Tip of the Week:

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Search While You Surf

Sarah L. Roberts-Witt

Whither search engines? If two companies--one being Web stalwart Netscape Communications Corp., the other a start-up named Alexa Internet--have their way, Yahoo! and all the rest will be obsolete.

Alexa steers you to links related to where you're visiting, even pages deep into a site.

In the latest version of Communicator (4.5), Netscape has introduced Smart Browsing, which lets you type common terms into the location field, then sends you to the site with that URL or the most relevant Netcenter department. Alexa (www.alexa.com) is a free utility for either Netscape Navigator or Microsoft Internet Explorer that provides you with statistics, such as company location, on the site you're viewing as well as a list of ten related links. Communicator also includes Alexa's list of ten related sites in the form of a feature called What's Related. What's Related functions as a companion feature to Smart Browsing without needing the Alexa utility.

Though the new browsing enhancements built into Communicator are definitely smart, they're not always wise, except when it comes to keeping you firmly planted on Netcenter soil. Typing Motown for example will send you to the Motown site, but usually your entries will send you to Netcenter, which may not necessarily be what you had in mind.

Alexa 3.0, which we looked at in public beta, generally found us relevant links no matter where we were on the Web, but Alexa's far from perfect. We were impressed that we could often get related links on a page-specific basis (go to the Inter@ctive Investor section of ZDNet and get links to other financial sites, not computer sites), but we found that Alexa wasn't yet smart enough to steer us to sites related to content on personal home pages like GeoCities.

Though certainly no replacement for searching heavyweights such as Yahoo! and its siblings, Alexa and Netscape's Smart Browsing are handy and can cut down on the dross that often accompanies traditional Web searching.

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From the December 1, 1998 issue of *PC Magazine*

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November 11, 1998

Search Site Resurrects 'Pay for Placement' Strategy

By MATT LAKE

In 1996, an established Web search site called Open Text began selling the top placement on its results pages to advertisers. For example, anyone who searched for "travel" would be given a list of links that included companies that paid for the privilege of appearing at the top of the list.

A wave of criticism forced the company to drop the practice. To Open Text's detractors, it smacked of the late 1950s payola scandal, which forced resignation on radio disc jockeys who had given air play to certain records in return for "considerations."

Shortly after abandoning its "pay for placement" strategy, Open Text stopped providing a Web search service altogether. But pay for placement didn't go away. A new search service called Goto.com, which launched last June, was designed from the ground up to include search results paid for by advertisers. In Goto.com's plan, commercial Web sites make bids for search terms that match their services -- like "travel," "Web hosting" or "books" -- and the highest placement in the list of results goes to the highest bidder.

Related Articles
Online Services Placing Their Ads Off Line (October 26, 1998)

Desperately Seeking Susan OR Suzie NOT Sushi (September 3, 1998)

Some thought Goto.com would suffer the same fate as OpenText, but so far, that has been far from the case. Less than six months after the site launched, it boasts more than 3 million visitors a day -- and over the past three months, its advertising base has tripled to more than 3,000 advertisers, with 50 new ones signing on each day. Goto.com has spent more than two months in RelevantKnowledge's list of the top 40 most-visited sites on the Web -- close on the heels of more established search brands like HotBot and the heavily advertised Snap.com.

How did Goto.com avoid OpenText's fate? According to Danny Sullivan, editor of the Search Engine Watch newsletter, Goto.com's timing is a lot better. "The Web was a lot less commercial two years ago -- in the Dark Ages," Sullivan said. "Not to be crass about it, but the Web is growing up a bit."

Goto.com also takes pains to differentiate its paid results from those generated by a traditional Web search database -- an effort OpenText didn't make. (For unpaid links, Goto.com uses the Inktomi search engine, which also powers Snap.com and HotBot). Next to every paid-for result is a label noting not only that the linked site is an advertiser, but also the amount paid for the placement. Such a disclaimer is akin to stamping "advertising" at the top of a magazine page, which makes it hard for anyone to cry "payola."

Sullivan believes that most people either don't notice the small-print disclaimer, or don't necessarily know what the phrase "Cost to advertiser: $0.24" means. Goto.com's chief executive, Jeffrey Brewer, believes that people don't care. "If consumers are satisfied, they really are not interested in the mechanism that gets the results," Brewer said. "And there's a high correlation between what sites are willing to spend and the value to the customers."

Goto.com isn't the only search company generating revenue from targeted advertising. Search sites like Excite and Infoseek serve targeted banner advertising on their results pages, based on search terms entered by their visitors. These sites charge a premium for such ads: the cost per thousand impressions (or CPM, in industry lingo) for so-called "keyed" ads is usually double what is charged for ads in general rotation. Meanwhile, Alexa -- a Web navigation service that provides the "What's Related" links in Netscape's 4.06 and 4.5 browser versions -- reserves the top two slots for sponsors.

Purists who don't like the idea of top billing going to the highest bidder are not necessarily going to fare any better at other search sites. While none of the major services surveyed had any plans to accept payment for promoting specific sites in results listings, many third-party consulting companies have no such qualms. These independent services, like GreenFlash or ClientDirect, claim that they can improve the chances of getting a site into the top results of AltaVista, AOL's Netfind, Excite, HotBot, Infoseek or Lycos -- and charge upwards of $500 a month for their services. They do this by creating so-called "bridge pages," Web pages constructed with the right balance of search terms to ensure high placement on a search site's results list.

While the bridge page trick may seem like cheating, Danny Sullivan describes it as necessary for fair placement on some search sites. "Most search engines were written for a time when we had text-oriented Web pages," Sullivan said. "They don't serve the function they're supposed to anymore. Amazon.com should be relevant for book searches, but they use a database, and other sites use frames. This blocks many search engines. The only way they have to get noticed is to use bridge pages." Because of this, search sites allow -- and sometimes encourage -- sites to use bridge pages to improve their placement.

Goto.com isn't the only search company generating revenue from targeted advertising.

To Web developers who want to promote their sites on a search engine, Goto.com's method is in some ways more appealing than back-door dealings with bridge page consultants. For one thing, Goto.com is a lot cheaper. It's a pay-for-performance deal -- no money changes hands until a searcher clicks on a link from Goto.com's results page. And Goto.com's referral fees can be as low as 11 cents, although they do reach as high as $1.55 for potentially lucrative referrals in topics like Web hosting.

In return, the advertiser gets a motivated visitor -- a huge bonus for commercial sites like BizTravel, one of Goto.com's customers. "We are not interested in driving unqualified traffic to our site," said Mimi Bloom, BizTravel's director of customer acquisition. "The visitors generated through GoTo.com signed up to become members at a rate three to four times higher than the average visitor. They are also purchasing at a higher rate than average."

Certainly, Goto.com has less traffic than more established search brands. But it recently cut deals with Microsoft to appear on its search page -- the default search site for many Internet Explorer users. In the highly competitive world of Web searching, Goto.com's rapid growth is unusual, especially in a year when search sites have diversified their offerings to include portal features such as news and stock quotes.

"So far, Goto's approach is an interesting anomaly," Sullivan said. "But I suspect you may see it happen with other services -- maybe as early as next year."

Related Sites

Following are links to the external Web sites mentioned in this article. These sites are not part of The New York Times on the Web, and The Times has no control over their content or availability. When you have finished visiting any of these sites, you will be able to return to this page by clicking on your Web browser's "Back" button or icon until this page reappears.

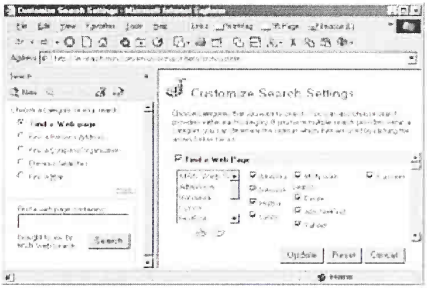
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10 Things You Must Know About IE5

Search Highs and Lows

- Introduction
- Search
- AutoComplete
- Toolbars
- Bookmarks
- Good-bye Annoyances
- Outlook Express
- Setup
- Internet Control Panel
- Off-line Web caching
- WebDev Tools
- The Wrap-up

Microsoft gave Internet Explorer's Web search functionality and user interface a much-needed overhaul. This part of the upgrade is partly aimed at features introduced in Netscape Communicator 4.5, although Microsoft has gone about it differently. Clicking the Search button on the IE 5.0 toolbar opens the Search Explorer Bar as a column on the left of the browser window.



IE 5's new Customize Search page gives lots of flexibility.
(Click here to view image larger)

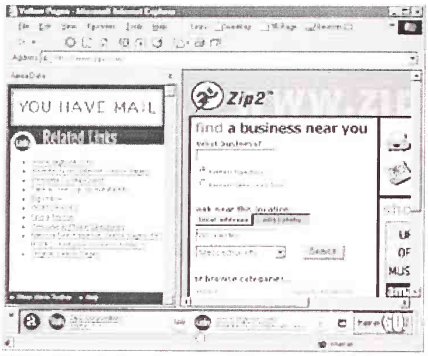
The new Search Assistant is a wizard-like screen that helps you choose the right resources to search. The revamped Search bar also sprouts new buttons across the top for New search, Next results page, Customize search engines, and Help. Customize gives you full access to many types of search engines, including addresses, e-mail address, maps, company searches and newsgroups.

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Site Map
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For the BEST...



IE5's implementation of the Alexa Web navigation service is just one example of how IE5's new Web Accessories can work.
(Click here to view image larger)

Unlike Netscape, Microsoft chose not to implement a Alexa's Web navigation service as aWhat's Related-like button in IE5. (Netscape Communicator 4.5's What's Related button offers the Alexa service as a drop-down menu of hotlinks to Web sites related to the page currently loaded in your browser.) Why bother when Alexa can be installed in IE 5.0 as a Web Accessory, a new kind of Web site-served component that takes the form of custom Explorer bars, toolbar buttons and menu items. Alexa, Bloomberg, MSN, and *The New York Times* already offer Web Accessories, and you can expect others to follow.

IE 5.0 Beta 2 lacks a true semblance of Netscape's Internet Keywords feature, which lets you type words or phrases, such as NASA, Ford Ranger or United Airlines in the Location bar, and pass through directly to those company Web sites. Well, actually it works a little bit in Beta 2, but not reliably enough to call it a feature. Microsoft is still working on this functionality, though, and it plans to let users selected among keyword database providers. Microsoft also intends to deliver a different interface than Netscape offers. Like Netscape, IE5 will return the best Web site match in a keyword search, but because it has a two-paned interface with the Search bar, it will also use the Search Pane to show alternative Web sites.

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Browser (Re)Vision

By Michael Tedeschi
Special to The Washington Post
Friday, November 13, 1998; Page N82

Just as Microsoft's Internet Explorer blurs the line between operating system and browser, Netscape's new Communicator 4.5 aims to fuse the browser and the Internet itself. One particular Web site, to be exact -- Netscape's own Netcenter site, which is required to use many of Communicator's new features.

Smart Browsing, the most significant addition, allows you to request Net sites in plain English. If a site in Netcenter's database of keywords matches, you go directly there. Thus, for instance, you can type "United Airlines" instead of "www.ual.com." If Netcenter can't match your request, it runs your keywords through the Excite search engine and displays a list of links that might work. (Or not.)

The new "What's Related" button quickly gives a short list of sites related to the site you're viewing, as determined by the Alexa Internet database. Beyond being a potential timesuck, this feature can spit up some puzzling results. At one Bruce Springsteen fan site, the list included pages on Phil Spector (well, he was a big influence on the Boss in the '70s) and the Spice Girls (the horror), but no other Bruce sites.

This Netcenter integration also allows you to store a profile, including your Netscape address book and bookmarks, on Netcenter, which you can then view on any computer. But the "import bookmarks" option yielded only error messages on four test machines; without that, Netscape's bookmarks still fall short of Internet Explorer's more flexible "Favorites."

Beyond its browser, Communicator includes a souped-up mail/newsgroup module. This Messenger component finally includes mail handling, importing and filtering tools competitive with what other free e-mail programs offer. It can also now search for a person's e-mail address in a variety of Web directories without requiring you to switch back to the browser module. Finally, the Composer Web-page-authoring tool soldiers on as an adequate utensil for basic Web-work.

But those last few features are the least relevant to most newer home

users; Smart Browsing, which makes the Web look much more intuitive, is the real draw here. But those people are least likely to be enthusiastic about waiting an hour and more for their modems to ingest this 14-megabyte monstrosity of a download.

Communicator 4.5, Netscape; Win 95, Power Mac, free.

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Next Bill Gates likely will be Internet wizard

By ELISA WILLIAMS
Newhouse News Service

When Internet advertising consultant Mark Grimes makes out his list of technology leaders for the 21st century, the founders of start-ups such as ICQInc. and Alexa Internet come to his mind.

Microsoft's Bill Gates doesn't.

"Gates and (Apple's Steve) Jobs and all these other guys are more out there on the speaking circuit than in the trenches really doing things," Grimes says.

Gates, Microsoft Corp.'s celebrity chairman, now is at center stage in a landmark antitrust trial that could dramatically alter the computer business. Microsoft, the world's No. 1 software maker, provides the equivalent of the buttons and knobs that control a PC.

But technological progress in the next decade won't be focused on the desktop computer. Instead it will be marked by the visionaries who bring simplicity to the Internet, says Anthony Citrano, a Web publishing pioneer who has served on the national Highway One government advisory board, which aimed to find ways to use technology to foster the democratic process.

"I think Gates' heyday is either here or just past," Citrano says. "He's the icon for the early- or mid-'90s. The visionaries that will emerge from the crowd today will have more relevant visions for e-commerce and information appliances."

When Citrano looks for inspiration and insight, he turns to Michio Kaku,author of "Hyperspace," Nicholas Negroponte of the Massachusetts Institute of Technology, and James Burke, author of "Pinball Effect."

A decade ago, Microsoft's operating software provided the canvas upon which the software industry created new products. Now the most important backdrop isn't the software that operates a single computer, but the Internet.

Gates has been a great figurehead, but the Internet changes everything, says consultant Grimes, whose company, eyescream interactive of Portland, Ore., designs marketing campaigns for Web sites.

"The Web is going to change and drive what happens," Grimes says. "I don't know how much Microsoft is going to control that."

Possibly even Gates recognizes his vulnerability.

In July, he turned over responsibility for the day-to-day management of the Redmond, Wash., software giant to Steve Ballmer, an 18-year Microsoft veteran. Gates — the world's richest man, according to Forbes magazine — said he made the change to devote more time to developing software.

What the antitrust trial illuminates is how Microsoft initially missed the importance of the Internet.

To Matt Ginsberg, a software entrepreneur and research professor at the University of Oregon, that was a telling misstep. "I don't see any evidence that (Gates) is really technically gifted," he says.

"A visionary would have developed the first browser himself," Ginsberg says.

But aside from technical prowess, few dispute that Gates is a gifted businessman. He has built an organization that, at least to date, has demonstrated an amazing ability to shift gears.

Few large companies have a track record like Microsoft's, argues Christopher Locke, whose Webzine, Entropy Gradient Reversals (www.rageboy.com), provides commentary on industry trends.

"(Microsoft) is vacuuming the planet for intellectual capital right now; they're finding the best and brightest," Locke says. "I don't think it's Gates so much as his major role in building the kind of organization that is viable. ... There is something about that model that seems to work. The people who have been brought in under that umbrella have a lot of impact."

Not only has Gates furnished his executive suite with some of the industry's top minds, but he also has built a marketing machine designed to bring entrepreneurs into its fold. Companies that develop programs to run on Windows operating software can take advantage of a slew of partnership programs with Microsoft that include everything from marketing support to an inexpensive booth at Comdex, the industry's largest trade show.

"They'll always have any new technology that's out there," says New Art Technologies Inc. President Jessica Keyes, an entrepreneur who serves on the Sprint Business Council and who has been an adviser for McGraw-Hill's DataPro.

"I can't see them not being the leader," Keyes says. "They just move too fast." //

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Report from the Field

Online World, Fall '98

The traditionals hang on to the limelight

by David Hoffman

Back in its accustomed time frame after last year's September setting, Online, Inc.'s Online World Conference and Expo took place October 12-14 in Washington, DC. The fall staple on the information industry trade show circuit offered a solid set of six conference tracks, a keynote by Alexa Internet's Brewster Kahle, the popular industry announcements session, and, for the first time, a rather extraordinary all-conference session on the third day entitled CEO Industry Panel.

The Keynote

Brewster Kahle is having fun. That much was very evident from the style of his talk on the first day of the conference. Having moved on from WAIS (Wide Area Information Server), the co-founder of Alexa Internet is now doing such things as donating an interactive digital sculpture that contains a snapshot of the Web gathered last year ("World Wide Web 1997: 2 Terabytes in 63 Inches") to the Library of Congress (see Barbara Quint's October 19 NewsBreak on this on the Information Today, Inc. Web site at http://www.infotoday.com).

Kahle's talk, entitled "Datamining the Internet for Quality Content," was in tune with both a major mission of Alexa Internet and a theme or "buzz" at the Online World conference—namely, making better sense of the data, information, knowledge,

(continued on page 68)

In This Issue

● **M&A Mania:**
In addition to **Wolters Kluwer's purchase of Ovid** (here on p. 1), **Dialog has acquired RDS** (p. 16), **Penton Media has bought MecklerMedia** (p. 18), and even we've gotten into the act. **ITI has acquired Fulltext Sources Online** (p. 55)

● **WEB SITE ALERT!**
In the **Ryan v. CARL copyright case**, a judge's **October 13 ruling** may significantly affect document delivery and interlibrary loan services. **See Barbara Quint's October 26 ITI NewsBreak** (too late for publication in this issue) at http://www.infotoday.com for analysis

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Online World, Fall '98

(continued from page 1)

Web pages, whatever ... that we are all coping and groping with today as we search sources on the Web.

Kahle asserted in his opening remarks that, with 20 million content areas (never-mind quality), the Web has reached critical mass. And with 20 searches taking place on the Web for every person who enters a library, it's safe to say that users have reached critical mass as well. So, he said, now is the time for librarians to build the digital library, all the more so as we've entered a stage where plenty of material will be born digital, live digital, and die digital.

He enumerated five characteristics for this "digital library as we want it," as follows:

1. Collection with selection
2. Access that's easy
3. Materials with organization
4. Preservation of the valuable and rare
5. Aid for patrons

And he then rated our progress on each count. His scorecard, as he called it, gave mostly low marks, but with reason for optimism. Some of the points he made included these:

The collection—i.e., the Web—is, of course, enormous, but hardly select. It's doubling every 8 months now, said Kahle, given the low barriers to publishing. And it can be astonishingly fast, as publication and dissemination of the Starr Report within hours of its release exemplifies. He offered no opinion as to whether that implies "selection" or lack of it, but gave us a "not yet" rating for characteristic number 1 above.

We *have*, however, achieved access that is easy. There is "24/7" availability from anywhere (provided you have a computer ...).

It's in areas 3, 4, and 5 where Kahle and Alexa Internet seem to have the most interest. Organization? If you're not careful, you can get a million hits using a search engine, "conveniently grouped in sets of 10," he pointed out. Alexa's approach is to use metadata for better "cataloging" and more appropriate "laying out of the stacks."

Kahle and Alexa Internet posit that one's Internet searching and surfing experience will be much more useful with "cataloged" information such as this immediately at hand: Who's behind the Web site you're visiting? What do others who've been there before think of the site? Can you trust the information that's there? How popular is the site? In terms of the "layout of the stacks," Alexa Internet wants to make it possible to browse as in open stacks, to see "what are the Web sites to the left and to the right of the one you're on." And indeed, Alexa's Site Stats, Related Links, and other features are at least a move in the right direction toward better organizing the digital library's vast holdings, said Kahle.

Kahle feels we're not yet on top of things in terms of archiving and preservation. Hence his "snapshot of the Web" gift to the Library of Congress, a move that, while largely symbolic, helps publicize his strongly felt philosophy that there is a role for librarians in both preservation and organization of the "born digital" collection. Alexa, he said, is even experimenting with an "out of print" Web-page service. Tapping into the company's Internet archives, you can request a Web page from the Alexa archive if you receive a "404—Not Found" message.

Finally, regarding aid to patrons floundering around on the Web, and how we can get librarians back in the loop, Kahle threw up his hands and said, "I don't know—yet."

So his scorecard read three out of five toward achieving the digital library as we want it, with easy access rating a "yes," and organization and preservation rating a "just starting."

Industry Announcements

The Online, Inc. folks chose to sustain the drama this year by moving the industry announcements session to the second day of the conference. This is the all-conference session for which industry vendors compete for the limited number of 6-minute slots to make what are intended to be major information industry announcements. Over its 6 year existence, the session has come to be a much-anticipated part of the conference.

Session moderator Mick O'Leary noted that industry veterans took the lion's share of slots this year, indicating, he said, that they're staying in the forefront with products and services both on and making innovative use of the Web. Here's a rundown of the announcements, with "links" to other spots here in this or other issues of *IT* or to ITI NewsBreaks on our Web site where you can garner more detail.

LEXIS-NEXIS Universe: Capping what O'Leary called a gradualist approach to putting its content on the Web, LEXIS-NEXIS announced its full-fledged Web-based Universe product for business users. Meant to be a one-stop source, LEXIS-NEXIS Universe essentially puts the company's entire comprehensive news, business, and legal collection at business users' disposal via their desktops. Flexibility in choice of content, searching options (including Boolean, plus "more like this" and a new "Focus" option), and pricing were major points LEXIS-NEXIS touted. For more, see the LEXIS-NEXIS news announcement story on page 1, as well as the ITI NewsBreak dated October 26, at http://www.infotoday.com. And watch for coverage of LEXIS-NEXIS Universe in Mick O'Leary's Database Review column in next month's *IT*.

Institute for Scientific Information (ISI) MetaMaps: ISI announced a new corporate initiative some weeks ago to leverage its databases with new analytical tools and products targeting the pharmaceutical, biotechnology, and health-care industries and their R&D efforts. Among the first fruit is the Alzheimer's Dementia MetaMap—the first in a number of upcoming MetaMap releases—developed in partnership with MetaWorks. MetaMaps feature carefully vetted, "highly extracted" clinical data and research, designed to serve as decision-shaping tools. Although arcane for many of us non-scientists, MetaMaps fit clearly into the category of products in evidence at this conference that are intended to help users "make sense" of data, and so to make it more useful. For more on ISI MetaMaps, read the ITI NewsBreak on page 17 and the news release story on page 47 of this issue of *IT*.

Enfish Tracker Pro: "The only new face among the greybeards," according to moderator O'Leary. Enfish announced what amounts to a personal product that, once again, means to help users make sense of, keep track of, and organize "stuff." In this case, it's all kinds of stuff, all the files—most any kind of format—on your hard drive, elsewhere on a LAN if you want, plus your e-mail, out on the Web to your bookmarked Web sites, and more. By way of "reading" (indexing in some form) all the material you direct it to, Tracker Pro can then organize it into topics and projects you want it to. See the news release story on page 13 for more.

Dow Jones Interactive Web Center: Actually, DJI's Tim Andrews used a couple

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Long-deserted ghost sites

Business Wr[illegible]er L.A. Lorek is taking a break. Her Cyberways column will return soon.

By PATTI HARTIGAN
The Boston Globe

Steve Baldwin didn't set out to be an online ghostbuster. It just sort of happened.

His story begins on a summer night in 1996, July Fourth, to be exact. He was drifting in Long Island Sound on a pleasure craft that belonged to his ex wife's parents. (Apparently, he got along with the ex-in-laws.) Anyway, the captain and crew had fallen asleep, leaving Baldwin at the steering wheel. Now, Baldwin is a Web master, not a shipmaster; in other words, he didn't have a clue.

"I had this sense of peril, and all of a sudden, I started thinking about the Internet," he recalls.

"I was working at Pathfinder (Time Warner's erstwhile pioneering Web site) at the time, and I suddenly realized that everything we were creating is immortal. It all crystalized for me: Web sites are like ghost ships, like the Flying Dutchman. Unless you keep a crew on board, they'll drift like haunted phantoms in the night."

Metaphorical musings aside, Baldwin had a slightly more pressing problem in the real world. He was steering straight for a jetty.

As the story goes, the captain woke up just in time to put the ship back on course. Baldwin got off the boat, retired his deck shoes, and set up Ghost Sites, a site that offers a whimsical chronicle of abandoned Web sites gathering cobwebs in cyberspace.

It is a sort of online mausoleum, with witty commentary about sites that continue to broadcast the "latest" news from, say, two or three years ago. Baldwin seeks out mothballed pages and rates them with a little ghost system (three ghosts for a site that is "dead, but well preserved"; five for a site that is "stuffed, embalmed and ready for Internet museum."

A few examples:

■ The "official" site hawking Woodstock '94, featuring pages counting down to the day of the event; posted in the infancy of the Web, they are quaint displays of simple text and images that give you the same feeling you get when reading an essay you wrote in grade school.

■ There's also a site commemorating the death of Jerry Garcia, offering the "latest" photos of tie-dyed mourners.

This is amusing stuff for online archaeologists, but these specters represent a deeper problem. What happens to a site once the novelty wears off and

RNET

s haunting Web browsers

the creator just lets it slide (or forgets the password required to update the content)?

The answer is: nothing. Such sites drift aimlessly. And they can be annoying obstacles for folks who use the Internet for research, slowing users down when ghost sites haunt search results.

By nature, the Internet is decentralized, without an official archivist or librarian. That's part of its chaotic beauty — and a source of its frustration.

"This isn't the Dewey Decimal System; it's a very imprecise way of finding information," Baldwin says.

The best way to avoid surfing ghost sites — albeit an imperfect solution — is to use the advanced options available on some search engines.

One search engine has even made dead sites part of its national advertising campaign: The television spots for Hotbot.com feature a bunch of old cronies offering investment tips: "I've got a hot one," a gray-haired suit advises. "Asbestos. It's a new miracle fiber." You get the point.

Andrew DeVries, director of marketing and communications for **Wired Digital**, Hotbot's parent company, says the ads aim to stress the fact that the search engine updates its database every three to four weeks to weed out "dead links" that lead users to a "Document Not Found" message. It doesn't do anything about the ghosts, though.

Baldwin stalks the little deserted islands of cyberspace to get a good laugh, but he's also a strong proponent of a serious project to archive the Internet — phantoms and all — for historical purposes. Founded in San Francisco by a pioneer named Brewster Kahle, the Internet Archive, **www.archive.org**, aims to preserve the ever-changing world of cyberspace, and it has already documented sites from the 1996 presidential election in an archive housed at the Smithsonian Institution. As for Ghost Sites, it has had a rather spotty life itself since the idea was spawned that fateful night at sea. Baldwin let it fossilize for about six months last year, but now it's up and running again. **disobey.com/ghostsites/index.htm**.

"It's an almost unpardonable sin," Baldwin concedes about the period when he let Ghost Sites become, well, a ghost site. He's no longer working at Pathfinder, one of the first publishing experiments on the Web that has lost its early promise. Baldwin is free-lancing these days. His primary gig? He's a ghost writer for **Time Digital** at **cgi.pathfinder.com/time/digital/**.

...scribers, 45 percent of whom come in through the Web and to announce that DJI was adding the full range of AP Newswire stories—roughly 3,000 per day—plus an archive of AP content. The Web Center is, in Mick O'Leary's words, yet another effort to help information users "make sense of the Web." It's a no-additional-cost service for DJI subscribers that complements the already wide and deep content of DJI with a huge, well vetted, managed, indexed, and therefore easily searched set of Web sites chosen by Dow Jones editors for their value to business researchers. Again, see the news release story on page 12 and the October 26 ITI NewsBreak on the Information Today, Inc. Web site for more.

Derwent and the USPTO: Not a pissed off or sad one, but a Big Sale. Derwent announced (several weeks previously, in fact) the leasing of its World Patents Index to the U.S. Patent and Trademark Office, rolling it out to all examiners' desktops. The news release story is on page 7.

DialogClassic, DialogWeb 2.0: The Dialog Corporation announced that its new DialogClassic, developed, it said, in direct response to requests from information professionals and power searchers, provides exceptionally fast Web-based access to command-based DIALOG via a Dialog mainframe Web server. And for the rest of us, the company announced plans to launch DialogWeb v. 2.0 later this year, with new guided search options including a subject hierarchy categorizing DIALOG databases into eight straightforward categories. A Dialog news release story is on page 3, and we offer assessment and analysis of both DialogClassic and DialogWeb 2.0 in an October 19 ITI NewsBreak on the Information Today, Inc. Web site.

EBSCO Online and EBSCO Corporate ResourceNet: EBSCO's spokesperson first discussed new Web-based serials management capabilities the company is offering, as well as its long-awaited EBSCO Online full-text journals service, which has been in testing for months. A release date has been set for EBSCO Online: January, 1999. Looking further ahead, the company also touted an upcoming revision of CollectaMax, to be called Corporate ResourceNet, now in alpha testing. Targeted to business intranets, it will offer more than 1,700 full-text periodicals, 1,000 abstracted titles, a directory covering over 200,000 companies, and thousands of Web links. See the news release story on page 10.

Electric Library Business Edition: Infonautics announced the *EL Business Edition* to show attendees, although the service has been available for some time now. While reaching out to novice business information users with its interface, Infonautics has nevertheless packed content (more than 8 million full-text articles from solid business publications and other sources, plus, for example, Hoover's Company Profiles) and power (advanced search options, Boolean as well as natural language, a new guided-search option) into its very economical business product. *IT* ran an Infonautics news release story on *EL Business Edition* in the September issue on page 8.

KnowledgeManager from The Gale Group: The new Gale Group (formed recently from the merger of Gale Research, IAC, and Primary Source Media) announced what was essentially an IAC initiative: the first results of a technology partnership with Aztech Corporation in which Aztech's Aggregation, Extraction, and Research Environment—tools to collect, analyze, and organize high-quality targeted information from the Web—are "wrapped into" the new Gale KnowledgeManager product that includes equally high-quality targeted information from proprietary database. For more on KnowledgeManager and how it can help those researching high-tech industries, see the news release story on page 4, as well as the October 19 ITI NewsBreak on our Web site.

The CEO Industry Panel

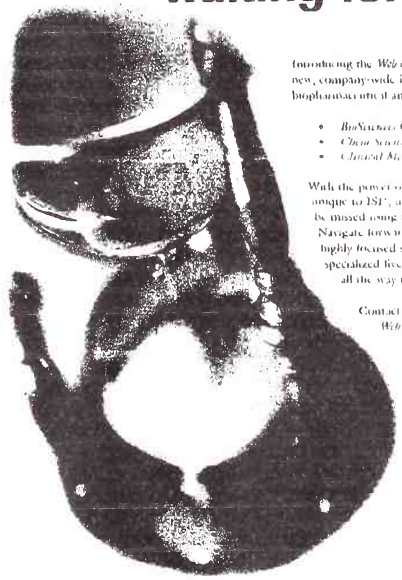
For my time and money, this opening session on the third day of Online World was the most interesting. Certainly it was the most fun to witness.

Online, Inc.'s Marydee Ojala with help and "counterpoint" comments from Arnold Information Technologies' Steve Arnold moderated and managed a group of six top information industry executives she had gathered to sit elbow-to-elbow at a table on the front of the auditorium. They were: The Dialog Corporation's Dan Wagner; Dow Jones Interactive's Tim Andrews; LEXIS-NEXIS's Hans Gieskes; Northern Light Technology's David Seuss; The Gale Group's Allan Paschal; and WavePhore Newsstand's Peter White. They comprised a very interesting group on a year when all their companies made Internet news, and they had interesting, substantive things to say.

Basically, you had to be there to feel the dynamics underlying these competing successes as Ojala put questions out to them. Each worked hard and successfully to be forthright and insightful in discussing the direction both the industry and his company were taking to promote his business and strategy. But not *too* much as to defend his position at any hint of criticism from another CEO panelist, and from a rather good humor. Subjects raised included upcoming enabling technologies (video-based

(continued on page 76)

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(continued from page 69)

information was discussed, disagreement was reached), branding (there was general agreement on the importance of branding as a way to vet information quality, and branding, by the way, of the information *source* more so than the information deliverer), vendor costs and pricing, training and support, and current-awareness information and its relationship to archival information.

There was, at times, an almost inevitable division of opinion, particularly around issues of information quality, cost, and pricing, with the "newbie" company execs from Northern Light and WavePhore in one camp and "greybeard" company execs (to borrow Mick O'Leary's term) from Dialog, LEXIS-NEXIS, Dow Jones, and The Gale Group in the other—although those latter four, fierce competitors that they are, found issues to spar over, too. See the "Point and Counterpoint" sidebar on page 68 for some of the fun and flavor.

In a year of a great deal of information industry corporate maneuvering, it was interesting to note the continuing high profile of the traditionals at this show, even as some new companies settled into confirmed seats alongside them. Granted, more than one of the traditionals is operating under either a new name or new management, or both.

Regarding tools and products for the future, they seem to be coming from both old and new camps. At Reva Basch's final "Wrap Session," panelists again noted the emergence of "sense-making" or "new efficiency" tools and technologies for information management from old and new players. In conference sessions, I heard talk of collaborative filtering, conceptizing, agent technology, and text visualization, as well as numerous references to the value of XML—with its emphasis on marking documents for meaning, not appearance. Some of this was in evidence on the exhibit hall floor already, and more is clearly in the offing.

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DIGITAL LIBRARIES, SEARCHING THE WEB DISCUSSED AT ONLINE WORLD

Discussions at the Online World Conference , which took place in Washington, D.C., 12–14 October, covered the need for digital libraries as well as Internet search engines and searching the World Wide Web.

Kahle Discusses Digital Libraries

"It is time for librarians to build digital libraries," declared Brewster Kahle, president and chief executive, Alexa Internet, during his keynote address. There is now a huge amount of material in digital form, he said, that will always be in digital form. This new material will "live and die in this new world," and the question is, "How do we relate to it?"

According to Kahle, there are 20 million content areas (sites) on the World Wide Web (and also 20 million books in the Library of Congress). The number of Web sites is continuing to grow and is doubling every eight months. In addition, for every visitor to a library, there are now 20 Web searches. Thus, the impact of the Web on people is becoming something "discussable." We are seeing a difference in the ways in which people communicate, and, therefore, this is the time to build digital libraries.

(continued on page 8)

duplicate services, introduce new integrated services, and lower costs for member libraries."■

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ONLINE CONFERENCE *(continued from page 1)*

Kahle listed five attributes for the digital library: collection with selection; access that is easy, open, and available to people; materials with organization; preservation of the valuable and rare; and help to patrons in finding what they are looking for. Today, he remarked, easy, open access is the only attribute that exists.

The collection of material on the Web is huge, and selection is difficult partially because the material is constantly changing. Access is available 24 hours everyday from home, school, or office, but only through a computer.

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As for organizing material, Kahle pointed out that Yahoo! originally set out to index the entire Internet; however, it has not kept up and has only 700,000 entries out of 300 million pages or 20 million sites. Search engines are yielding too many hits, and these companies are giving up and trying to catalog less and better; they are becoming "media properties" and cataloging their own materials. It would be very costly to catalog everything on the Web by traditional methods, Kahle commented, and the traditional cataloging structure will not move easily into this world.

Kahle's company, Alexa Internet, is attempting to help organize the Web by providing two types of metadata: cataloging and laying out stacks. For each Web site it shows who is behind it, providing information on its popularity and areas of expertise, as well as third-party ratings. In addition, it is organizing the sites into specific subject categories and attempting to show related sites. When a user brings up a specific site, this information is displayed on the screen. Thus, Alexa is attempting to tell the user whether he is in the right place and where else he might want to go. It gathers this information by leveraging what other people thought about a site and where else they went on the Web from each site. Kahle asked, "Have we done a good job?" and answered his query with "It's just this side of useless," but, he said, it's a first step to building this component of a digital library.

Alexa is also working on preservation of Web material. It has been archiving the full Web for the last two years and currently has 12 terabytes of material, which it has donated to the Library of Congress (see related story, page 1). Much information today is appearing only on the Web and should be preserved. Alexa is trying to show that libraries should have a role in the preservation of digital materials, and, Kahle remarked, the Alexa material is the first digital collection LC has accepted. With preservation come problems with fair use and copyright, however, and with license agreements, a digital library may not have the same things in its collection next year as it does now. Alexa is hoping to make sense of copyright and fair use in the digital era.

The average Web site lasts 77 days, Kahle said. Because of this, Alexa is working on an out-of-print Web page service so that when a user gets a 404 Not Found message, he can hit an Archive button and receive the page from Alexa's Internet Archive.

The last attribute of a digital library—aid to patrons—is a key component. Kahle stressed that librarians must "get back in the loop," must build specialized collections, and must proactively alert key patrons to new information sources. Kahle raised the question of how to do this and said he hasn't "figured it out."

Search Engine Features Described

Representatives from six leading search engines—Alta Vista, HotBot, Northern Light, Excite, Lycos, and Infoseek, discussed their products during the session on "Web Search Engines: How They Work, How To Use Them."

Jim Jackson, Alta Vista, mentioned several new features on Alta Vista that are designed for novice searchers:

- Ask Alta Vista uses natural-language processing technology to provide answers for about half the commonly asked questions the engine receives.
- Phrase Detection recognizes commonly used phrases even when the user doesn't use quotes and returns more relevant search results.
- Family Filter filters objectionable and inappropriate content and is compatible with client-side filtering software.
- Photo Finder indexes photographs by keyword and provides results with thumbnail photos; users can then request similar photos.
- Spell Check prompts users when misspelling is detected in English, French, Italian, or Spanish; additional languages will be added in the coming months.
- HotBot is also working to attract novice users, said Joel Traher. It is providing "channels," such as business or education, that orient users to the information for which they are searching and also contain editorially developed results for certain searches. For some queries, HotBot lists the four to 10 "most visited" sites. It is also developing tools that will help users to formulate their queries.

Marc Krellenstein, Northern Light Technology, LLC, pointed out that Northern Light contains World Wide Web and Special Collection documents in one database. It contains 95 million unique documents and is second to Alta Vista in size. In addition, it contains 4 million other documents from more than 5000 sources. Northern Light's focus is a "complete, precise search"; it is not a portal and has no E-mail or chat services.

Krellenstein presented several tips for Northern Light searchers:

1. More terms (three to six) will yield better results. Terms can be removed if the results are too narrow. Significant terms should be included in order for documents to match; other terms are used to rank documents appropriately. When other options fail, use full Boolean expressions.

2. Use the correct search form—simple search, power search, industry search, publication search, or current news search.

3. Use the search folders. Folders tend to emphasize the best documents; they contain only the documents on the result list and are as specific or general as the query. Folder themes are subject-oriented and hierarchical, and documents may appear in more than one folder. Folders allow

rapid hierarchical navigation of the full result list and may identify subtopics of interest or noninterest.

Krellenstein indicated future plans for Northern Light include enhanced subject classification and folder and directory browsing, a notification service, and additional search forms.

Lycos is now focusing on making searching easier, stated Ken Lang. New features include "smart spidering," quality catalog build/agent filtering, and expression of user needs.

A patented technology enables smart spiders that know where and what to spider and in what order to spider. These spiders try to go after pages users want.

Lang pointed out that bigger catalogs are not always better

Infoseek's search results, she said, indicate "recommended" information and list reviewed Web site topics. Its directory is "100 percent humanly cataloged" by experts in their fields. Users can refine their search within a set of results rather than having to begin all over again.

Principles of Web Searching

Susan Feldman, Datasearch, discussed basic principles of Web searching during the session entitled "Search Engines: Tips & Techniques."

Searchers should know how each search engine's search software works, especially the relevance-ranking principles of each search engine. Different search engines, she pointed out, rarely achieve identical sets of data because

INTERACTIVE WEEK | NOVEMBER 16 1998

CONTENT & PUBLISHING

Online Content, Services and Communications

Experian Corp. acquired a *19 percent stake in* **IntelliPost Corp.** *(www.intellipost.com) in a deal that integrates two leading providers of marketing-oriented e-mail services. Experian will merge its MyPoints.com e-mail reward program with the larger BonusMail service operated by IntelliPost, giving it a combined reach of 17 million users.*

The Walt Disney Co. *(www.disney.com) named* **Ken G. Hahn**, *vice president and general manager of* **Readers-Digest Software Inc.'s** *Red Orb entertainment division, as senior vice president and general manager of Disney Online. Goldstein will oversee Web services such as Disney.com and the Disney Daily Blast.*

Mecklermedia Corp. *said it has acquired three Web sites — Jumbo (www.jumbo.com), JustSmil (www.justsmil.com) and Newslinx (www.newslinx.com) — with plans to integrate the sites under Mecklermedia's Internet.com network (www.internet.com).*

Excite Inc. *(www.excite.com) said it will offer investment education content from* **Charles Schwab & Co. Inc.** *on its Money and Investing Channel.*

Planetdirect Corp. *(www.planetdirect.com), a Web personalization service subsidiary of* **CMG Inc.**, *said it forged eight new content partnerships, including deals with* **Deja News Inc.**, **OnHealth.com** *and the* **Rolling Stone Network.**

AT&T WorldNet *(www.att.net) has launched a personal Web page publishing service at community.att.net. The service is available to WorldNet subscribers.*

Entrepreneur Inc. *'s channel oriented to small business (smallbusiness.yahoo.com) will integrate content from* **Entrepreneur Magazine** *(www.entrepreneurmag.com).*

Web Giants Jockey For Screen Time

By Steven Vonder Haar

Exactly what was America Online Inc. thinking when it spent $287 million to buy Web-based instant messaging service ICQ in July?

Even with a grass-roots subscribership that now numbers 20 million users, its revenue is a rounding error on AOL financial statements. ICQ sells virtually no advertising and has no heritage in online retailing.

What ICQ (www.icq.com) does have, though, is a bucketful of time. More specifically, it has its users' time. More than 5 million subscribers tap into the free Web service daily, maintaining links to ICQ servers for more than two hours on average.

All the while, the ICQ software posts a small on-screen box that lets subscribers know when acquaintances log in or leave the ICQ system, providing a channel that friends can use to exchange messages instantly online.

That ICQ window also gives AOL (www.aol.com) on-screen real estate — a strategic asset that may become a pivotal weapon in the Web navigation business during the next 18 months.

"I look at this as a next-generation communications portal," says ICQ Chief Operating Officer Fred Singer. "Clearly, we have a great advantage over navigation hubs because our users stick with our service for so long."

This week, ICQ will take its first step in its portal evolution, announcing a deal to integrate search services supplied by Inktomi Corp. into its software.



The partnership means that ICQ users will be able to conduct search requests directly from the ICQ box on their screen, potentially diverting some search traffic that may otherwise be bound for traditional navigation hubs, such as those operated by Excite Inc. or Yahoo! Inc.

ICQ's move into search, however, is just part of more sweeping fundamental changes being implemented by Web giants such as AOL, Microsoft Corp. and Netscape Communications Corp. that could wind up challenging some of the industry's most basic assumptions about how major Internet portals attract traffic.

The battleground for the navigation business is shifting in multiple ways from the individual Web sites to screens that users stare at while surfing the Web.

The approaches can differ technically but aim at the same target. The idea is to draw traffic by integrating basic search and navigation features into software already sitting on the desktop, such as Web browsers or ICQ's instant messaging application.

This month, for instance, Microsoft (www.microsoft.com) took the wraps off a new trial version of its Internet Explorer browser, which features the capability for individual publishers to create navigation bars called "Explorer Bars" that stay on screen while an individual moves from Web site to Web site.

Microsoft's MSN.com site, one of only four companies to develop their own branded version of the Explorer Bar for the trial of the browser software, incorporates a variety of on-screen links that can drive users ▶

Advertisers Are Willing To Pay For Play

Advertisers are capitalizing on new ways to grab and hold on-screen real estate to create the equivalent of billboards that always remain in sight no matter where Web surfers go online.



Web21 Inc. — a company best known for its 100Hot lists of high-traffic Web sites — last week took the wraps off its 100Hot Surfboard. Users clicking on the service, which is offered via banner ad promotions, can have custom versions of 100Hot lists incorporated into their bookmark file; logos of lead advertisers are integrated as a link that is always visible from the browser's personal navigation bar.

"We think this is an innovative way to get on the browser," says Bert Fornaciari, president of Web21 (www.100hot.com).

Ameritech Inc.'s online Yellow Pages unit and Microsoft Corp.'s Sidewalk service are among the companies that have agreed to pay for promotion on custom versions of the Surfboard service.

Other companies find on-screen real estate so valuable that they give away Internet access to users willing to share it. Earlier this year, a start-up called NetZero Inc. (www.netzero.net), backed by the idealab! Internet incubator, began offering free Web access to users willing to accept a banner-ad-sized window appearing on top of the browser. The window, which cannot be closed while a NetZero subscriber is online, rotates ad messages every 30 seconds.

"We know that we can target our ads, and we know that users will see them," says NetZero Chief Executive Officer Ronald Burr. — *S.V.H.*

back to its portal site. Features include stock quotes, a search box, an entryway to MSN's Hotmail service and news headlines.

"This is like having a footer for the entire Web," says MSN Product Manager Nichole Hardy. "It's a portal that's less than an inch high."

No decision has been made on which companies will be featured as default providers of Explorer Bars when Microsoft releases its final version of Internet Explorer 5.0. However, analysts speculate that the bundling of MSN's on-screen search bar integrated into the browser may hinge on the outcome of the government's ongoing antitrust case against the company.

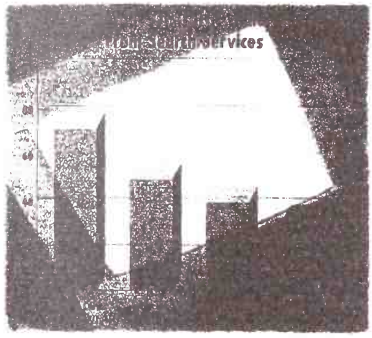
Netscape's intentions for grabbing on-screen real estate, in contrast, appear more clear-cut, even though fewer details are available on its planned applications. Netscape (www.netscape.com) is developing strategies in which pieces of its browser will lead directly to content stored in the company's NetCenter Web portal.

One possible application, analysts say, would have users storing Rolodex and personal contact info at the NetCenter site, which could be accessed directly using preprogrammed buttons on Netscape software.

"The vast majority of users prefer having navigation assistance built into the product," says Eric Byunn, group product manager for Netscape Communicator. "By integrating the two more closely, we can provide a better experience."

Byunn bristles at the suggestion that Netscape is transforming its browser into one giant on-screen billboard designed to drive users to its Web site.

But other industry competitors would not mind trading places with Netscape. Holding nearly half the market for browsers, its software still has enormous clout in driving Web traffic. Yet, it is not as handcuffed as its rival Microsoft by antitrust charges being leveled by the U.S. Department of Justice.



While most of the jostling for on-screen position may be happening in the shadows of the Web industry now, it doesn't diminish the importance of the fights taking place, says Brewster Kahle, president of Alexa Internet — a company that last month generated 100 million page views serving up data on its banner ad-sized on-screen navigation guides.

"The most valuable real estate in the world is screen real estate," Kahle says. "It's more valuable than Tokyo apartments, so you had better make good use of every square inch."

Even with the looming threat of competition from on-screen navigation offerings, portals still are flying high. Yahoo!, which has seen its stock more than quadruple in value since the beginning of the year, hit another all-time high share price just last week.

But much of that Wall Street value is predicated not on current financial results but on the prospects for future growth. If on-screen navigation diverts even a portion of the traffic that would have gone to the traditional portals, it could eat into the growth rates that have been fueling the companies' meteoric stock rise.

"If your traffic slows or, God forbid, it drops off, you have a world of worry ahead for you," says Mark Mooradian, an analyst at Jupiter Communications LLC. "Traffic still is everything to Wall Street in terms of search and directory companies."

But the levels of risk are different for the competing navigation hubs. Yahoo! (www.yahoo.com), for instance, generates only 30 percent of its traffic from the searches most vulnerable to be swiped by on-screen navigation services. Infoseek Corp. (www.infoseek.com), in comparison, generates more than two-thirds of its traffic directly from search, according to Jupiter.

For the portals, the battlefield of the future rests not in providing search services but in offering a broader array of applications that make the Web more useful, says Brett Bullington, executive vice president at Excite (www.excite.com). For the most part, these are features that do not translate well to the limited space offered within an on-screen navigation bar.

"The goal now is to capture as many customers as we can," Bullington says. "What you have to look at is: What habits have consumers developed and how can you take advantage of that?"

Yahoo! Chief Operating Officer Jeff Mallett says the prospective rise of on-screen navigation does not pose a serious threat to the company.

"If you have a media approach and the brand that goes with it, you will continue to do well," Mallett says. "It will influence only a small portion of the people using the Internet."

Maybe so, but AOL still is charging ahead with its $287 million bet that on-screen navigation can play an important role in the future of the Web.

In addition to the changes planned this week for ICQ, the company has integrated search and navigation capability into its AOL Instant Messenger service that links Web users in real-time with subscribers to AOL's flagship service.

In essence, the nation's largest online service is betting that its online communities can keep their software active on users' screens, opening the door to providing extra navigation services.

"It's not clear yet what the winning strategy will be," says Barry Schuler, president of AOL Interactive Services. "But we see communications and community as the best way for branching into offering other services." ▲

Start-Ups Rev Up For On-Screen Real Estate

Internet start-ups are trying to elbow their way into the fight to provide on-screen navigation.

While industry giants such as America Online Inc. and Netscape Communications Corp. hold the inside track in the race to grab on-screen real estate primarily because of their existing customer base, companies like Alexa Internet and Bigfoot International Inc. still see room for themselves in the developing market.



"If you can make yourself useful enough to earn screen real estate," says Alexa Internet President Brewster Kahle, "you've earned people's attention."

About 1 million users have downloaded versions of Alexa's service — a banner-ad-sized window that displays lists of recommended sites comparable to the one the user is actively reading.

Along with the link lists, Alexa can serve up targeted ads.

Last month alone, Alexa (www.alexa.com) generated 100 million page views.

Netscape has integrated a version of Alexa's service into the 4.5 version of its Communicator software product line in a deal that holds the potential for significantly expanding the reach of Alexa's content.

Bigfoot (www.bigfoot.com), in contrast, is building its push into the on-screen market on the shoulders of Microsoft Corp.'s Internet Explorer browser. Bigfoot has developed a customized version of the Microsoft browser that it calls NeoPlanet.

With NeoPlanet, Bigfoot layers a new on-screen look on top of Microsoft's traditional browser, changing the type of tools and navigation aides available to users on-screen.



The revamped browser, for instance, features a bank of channels offering one-click access to recommended Web links in specific topic categories.

Individual publishers and navigation hubs can insert their own programming into the NeoPlanet browser. Last week, for instance, Network Associates Inc. released a version of the NeoPlanet browser carrying the brand of its McAfee virus protection software.

Network Associates will offer downloads of its NeoPlanet browser later this month, creating the equivalent of an on-screen navigation port focused on computer news and utilities.

"This is a way for them to capitalize on their software distribution channel to have a more sticky relationship with their most active customers," says Drew Cohen, general manager of NeoPlanet (www.neoplanet.com).

But getting loyal customers to download on-screen applications to the desktop is not enough. The challenge is to get people, once there, to use the services and integrate them into their daily routine on the Web.

"It has to be useful," Alexa's Kahle says. "If it's not useful, you're gone." — *S.V.H.*

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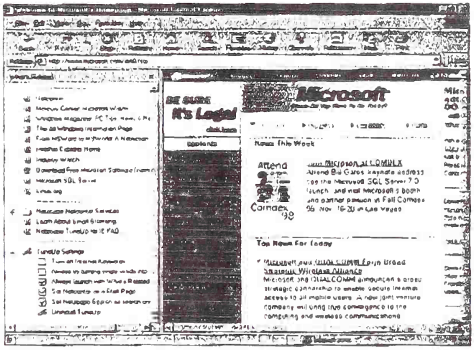
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NOVEMBER 16, 1998

Bacon's

SNAPSHOT

Netscape's bait fails to lure IE users to Netcenter Web site



Netscape Communications Corp.'s TuneUp for IE (at sitesearch.netscape.com/smartupdate/su_tuneup.html), which makes it easier for Internet Explorer users to avail themselves of Netscape's Communicator and Netcenter Web site features, does little to drive users to Netscape's Web site or browser. Keyword searching is the most useful feature in TuneUp for IE. IE users can get an equivalent of the TuneUp's What's Related feature by using the Alexa plug-in for Internet Explorer. —*Jim Rapoza, PC Week Labs*

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Bacon's

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MAKING THE UPGRADE

Netscape, Microsoft lift the browser bar, while Apple, America Online weigh in with latest versions

By Doug Bedell
Staff Writer of The Dallas Morning News

Netscape, Explorer rivalry intensifies

The interminable browser war continues this month with two hefty new packages from our heavyweight contestants, Netscape and Microsoft.

NETSCAPE COMMUNICATOR 4.5

Netscape's latest browser, Communicator 4.5, is an 18-megabyte monster equipped with Smart Browsing, a new tool designed to untangle the World Wide Web. For those in http // overload, the newest version allows entry of simple keywords.

Plug in "Chevy Trucks," for instance, and a customized Alexa database automatically brings the user to www.chevrolet.com/trucks. Another innovation is the new "What's Related" button, which provides a drop-down menu with links to 10 sites that have subject matter similar to the page you're viewing.

It's not foolproof. Keywords often lie. And some Internet addresses won't work right with the new tools. But the features give novices a helpful boost.

Netscape is so proud of its patented Smart Browsing that the company recently announced TuneUp for IE, an add-on that boldly brings the entire Smart Browsing system to users of Microsoft's Internet Explorer.

The Basics

MAC OS 8.5

Cost: $99

Top new features: Sherlock, a beefed-up version of the search function Find File; drag-and-drop printing for files using the font control program PostScript; and for PICT, EPS and JPEG graphics files; faster file sharing among networked computers.

System requirements: PowerPC processor, 150MB free disk space, 16MB physical RAM with virtual memory set to 24MB or more. Note: OS 8.5 and future releases won't work with older Apple processors or Apple PC compatibility cards.

Where to get it: Download from Apple Computer's Web site, www.apple.com; call 1-800-795-1000; or through retailers.



AOL 4.0

Cost: Free

Top new features: Redesigned screens; enhanced e-mail formatting; color text for chat rooms; improved navigational system; faster streaming media.

Where to get it: Download from America Online's Web site, www.aol.com; find CDs tucked inside numerous magazines or call 1-800-540-9449.



Explorer 4.01 browser, Outlook Express 4.01, Netscape 4.0.5 and AOL 4.0.

This operating system, released Oct. 17, also goes international, providing multilingual Internet access for viewing Web sites and e-mail messages, a feature that is becoming increasingly necessary in the hyperlinked world.

Although problems with Mac OS 8.5 right now seem minor, new reports are cropping up on the Web sites MacInTouch (www.macintouch.com) and MacFixit (www.macfixit.com). Among them are complaints that icons for files and folders have disappeared from the desktop.

Vivid color, better e-mail mark AOL 4.0

America Online's screen, with its klutz and clutter, gets a major overhaul with AOL 4.0.

And chances are you won't have to wait near the mailbox long for your very own copy. In fact, there's probably one pasted inside that magazine on your coffee table.

AOL, whose 13 million subscribers make it the world's largest online service provider, brings the computer world its new look in a massive heap.

The company, which got in trouble with crowded servers when too many people took advantage of the 100

entire Smart browsing system to users of Microsoft's Internet Explorer browser. TuneUp will be out soon for Odds and ends. Netscape won't offer an update for any pre Windows 95 Microsoft operating systems or older Apple operating systems. Tests by private labs confirm minor improvements in speed for loading page codes and graphics. A bug has been reported that allows a malicious Web site operator or e-mail sender to wipe the contents of a user's browser cache and directory files. Netscape says fixes are imminent.

MICROSOFT INTERNET EXPLORER 5.0

Microsoft Internet Explorer 5.0 weighs in with IntelliSense, a set of technologies designed to save time while searching, navigating, organizing and accessing information. IE 5.0 is to ship by year-end, but a test of IntelliSense in the "final beta" version showed it allows for customizing screen graphics, including controls for access by children.

A new search assistant similar to Netscape's has been added to allow scanning of the Internet by asking for a Web site, a map or other criteria. And the "autocomplete" feature first implemented in IE 4.0 has been enhanced to fill out those omnipresent Web-based forms such as product registrations. Another convenience is a new GO button, which now appears next to the URL, or Internet address, window.

Responding to user complaints about massive downloads needed for previous browser releases, IE 5.0 designers have built in a smaller version that provides the newest features with a standard download of about 19MB.

An additional feature is the Windows Critical Update Notification tool, which automatically tells Windows 98 users when there are bug fixes and security patches available.

That's good, because the full-installation version of IE 5.0 presented major problems for modem-sharing on our networked Windows 98 computers, ultimately requiring its deletion from the system.

The Microsoft warning carried with this test product is to be taken seriously. "This software is for advanced users such as corporate administrators and other individuals who regularly test unreleased software. If you are unsure of whether this accurately describes you, we recommend you do NOT download this software."

A recently released survey showing that IE has become more popular than Netscape's products ignores statistics uncovered this month from the corporate arena. An independent study of company computer professionals by Zona Research showed that Netscape browsers which have trailed IE in the corporate market, have moved to a 60 percent market share after they became free products. See www.zonaresearch.com/browserstudy/1998/oct98/98browser.html for more information on the study.

1-800-540-9440

MICROSOFT INTERNET EXPLORER 5.0
(Final beta version)

Cost: Free
File size: 19MB
Top new features: IntelliSense AutoCorrecting URLs
Bugs: Can interfere with proxy server operation on LANs. A report is being compiled at Microsoft's Internet Explorer 5.0 address on the Web: www.microsoft.com/windows/ie/ie5
Where to get it: Download from the Web address above; retail version due out by 1999



NETSCAPE COMMUNICATOR 4.5

Cost: Free via download; $30 for disk
File size: 18MB
Top new features: Smart Browsing; What's Related
Bugs: Check the Web site: www.interhack.net/pubs/whybscbad.html for security questions. For Netscape's response, see home.netscape.com/eng/security/related/faq.html
Where to get it: Download from the Web site: home.netscape.com/download, call 1-800-215-0672 or check retailers.

Mac OS 8.5: When you feel the need for speed

The new cool tools from the computer company that calls itself "cool" are so cool, they're like "getting a new Mac for $99," says why-cool Apple interim CEO Steve Jobs.

Hype aside, the spirit and vision imbued in Mac's updated operating system is enough to raise the eyebrows of the most ardent Windows zealot.

Faster file-sharing among linked computers, built in multilingual support and a no-problem, 15-minute installation make the product enticing for 8.0 devotees. Some bugginess and hardware support problems, particularly for printers, are its chief drawbacks.

In all, Mac OS 8.5 delivers 70 new features, including Sherlock, a multifaceted search program that zips through home-based hard drives and the Internet with blinding speed. This agent, a talented relative of the old Find File engine, can ferret out keywords from files stored anywhere on your hard disk or on the Internet, using "natural language" phrases such as "Who shot J.R.?"

The Internet searches don't even require launching a browser. Test searches of a two-machine network showed impressive speed. Across 4 gigabytes of disks, Sherlock came back with 39 hits in 20 seconds.

That performance also highlights another of OS 8.5's achievements. File-sharing speeds on 100 megabit Ethernet cards, which link computers, have been boosted dramatically. In fact, Apple maintains that this operating system is quicker than Windows NT and twice as fast as its own 8.1 release.

Files using PostScript, which controls placement of fonts in graphics, and files using the graphics programs PICT, EPS and JPEG can now be dragged to a printer icon, also without launching an application. And Applescript, which runs automated tasks and now comes with the PowerPC, is five times faster than previous versions.

The $99 also gets upgraders 30 days of free Internet access. Microsoft's Internet with crowded servers when too many people took advantage of the 100 million-plus free disks shipped in 1994 and 1995, is again disseminating its plastic by the pound.

"The CD-ROM's are coming!" AOL president Bob Pittman said in July, when AOL 4.0 was made available via download. This time, Mr. Pittman said, the company's equipment is ready for an onslaught of new subscribers.

AOL 4.0, called Casablanca, is much more polished than its predecessor, in an abstract way. A rainbow of colors in the tool bar greets visitors with shortcuts to popular features. The location of the back and forward buttons helps ease navigation, and the Favorite Places feature now keeps a list of 25 previously viewed sites.

But the most noticeable — and appreciated — enhancements are quickly visible in e-mail. Multiple attachments can now be sent and received on one message. And, within messages, hypertext is now supported, meaning users can add style to their messages, color to their fonts and a Web page look to their presentations.

Chat rooms, too, are blessed with living color — in the fonts and links. As a result, chat screens take on a whole new texture and personalized appearance.

Casablanca allows users to switch screen names without disconnecting. Curiously, however, this trick is not available during peak usage hours.

Subscribers also are given the chance to list their interests, and AOL servers will search about its site and return with a directory of suggested AOL services and sections. Those looking to stay on top of things may enjoy AOL's 19 news and entertainment channels, which are updated regularly each day and can be examined with search tools. The channels now have a uniform feel, making the old ones seem downright sloppy.

Another improvement is the service's streaming media — sights, sounds and other information that come directly from the source as opposed to being downloaded, then viewed. Slide shows, video and audio can be accessed immediately.

AOL marketers are planning to spend $127 million to promote 4.0 for the quarter ending Dec. 31. They claim to have developed a more efficient method of targeting potential customers, instead of "disk spamming" the population.

The 4.0 changes may not seem revolutionary to many Internet denizens, but their marketing promotion certainly promises to be unavoidable.

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NOVEMBER 19, 1998



Bacon's

On the Web, if it's trash, it will endure

The Web is an unstable medium patently unsuited for archival purposes. It is the nature of cyberspace that vast resources appear and disappear without warning. The good stuff does not stick around for long. Alexa Internet, a San Francisco firm that maps and mines great expanses of the Web, figures the life span of the average Web page to be just 77 days. This much we know.

It's only lately that I've come to notice a parallel phenomenon. While the stuff you need is gone faster than you can say "404 — file not found," it seems to me that the stuff nobody needs has a half-life surpassing that of nuclear waste. In other words, valuable content on the Web tends to be both scarce and perishable. And garbage

and perishable. And garbage tends to be ubiquitous and unextinguishable.

That's my guess — the very worst the Net has to offer will probably be aloft in the digital cosmos indefinitely. It matters not whether we're talking about e-mail, Usenet or the Web. Idiocy and poor taste are not application-specific.

When I am in my dotage, holding forth in a ratty bathrobe on the porch, you can bet that someone, somewhere will be spamming the globe with the latest iteration of a chain letter about a dying boy named Craig Shergold who needs business cards. Long after you and I have logged off this mortal coil the Neiman-Marcus cookie recipe will live on. When the seas rise and swallow up the continents, the last electronic remnant of Earthbound civilization will be a posting with the subject line "MAKE MONEY FAST!!"

Let us consider the recent Web-based woes of "Doctor" Laura Schlessinger. According to news reports, a former lover-

In other words, valuable content on the Web tends to be both scarce and perishable. And garbage tends to be ubiquitous and unextinguishable.

mentor of Schlessinger sold a dozen compromising photos of her to Internet Entertainment Group, one of the top porn publishers on the Web. The 51-year-old talk-show host sued IEG, seeking to block the firm from posting the snapshots, which were taken when Schlessinger was 28. A federal judge in Los Angeles initially agreed and issued a temporary restraining order. But then, five other sites not named in the suit illegally reposted the same photos. Many other individuals uploaded the shots to various Usenet newsgroups. The holier-than-thou harridan of the airwaves found herself in a rather uncomfortable position. Those photos had become a permanent feature of the electronic landscape and no legal tool could remove them.

could remove them.

On Nov. 2, U.S. District Judge Dean Pregerson lifted his restraining order in the case. He said, in essence, that he was not going to entertain further arguments about the closure of the proverbial barn door now that everyone recognized that the horse was long gone.

As Derek Newman, general counsel for IEG explained it, Schlessinger's case on invasion of privacy was no longer viable because "the photos were no longer private facts." This is the part I find interesting: The law didn't care that third parties appear to have made private facts public — and done so illegally. Once things are widely disseminated, injunctive relief is unlikely. This is not a new concept. But it does take on new significance when applied to a medium that — unlike print or broadcast — affords any citizen the power to instantly duplicate and distribute "private facts" a million times over.

David Plotnikoff writes about the wired life for the San Jose Mercury News, 750 Ridder Park Drive, San Jose, Calif., 95190. E-mail: dplotnikoff@sjmercury.com.

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Bacon's

Next high-tech visionary among Internet wizards

By ELISA WILLIAMS

Newhouse News

When Internet advertising consultant Mark Grimes makes out his list of technology leaders for the 21st century, the founders of start-ups such as ICQInc. and Alexa Internet come to his mind.

Microsoft's Bill Gates doesn't.

"Gates and (Apple's Steve) Jobs and all these other guys are more out there on the speaking circuit than in the trenches really doing things," Grimes says.

Gates, Microsoft Corp.'s celebrity chairman, now is at center stage in a landmark antitrust trial that could dramatically alter the computer business. Microsoft, the world's No. 1 software maker, provides the equivalent of the buttons and knobs that control a PC.

But technological progress in the next decade won't be focused on the desktop computer. Instead it will be marked by the visionaries who bring simplicity to the Internet, says Anthony Citrano, a Web publishing pioneer who has served on the national Highway One government advisory board, which aimed to find ways to use technology to foster the democratic process.

"I think Gates' heyday is either here or just past," Citrano says. "He's the icon for the early- or mid-'90s. The visionaries that will emerge from the crowd today will have more relevant visions for e-commerce and information appliances."

When Citrano looks for inspiration and insight, he turns to Michio Kaku, author of "Hyperspace," Nicholas Negroponte of the Massachusetts Institute of Technology, and James Burke, author of "Pinball Effect."

A decade ago, Microsoft's operating software provided the canvas upon which the software industry created new products. Now the most important backdrop isn't the software that operates a single computer, but the Internet.

Gates has been a great figurehead, but the Internet changes everything, says consultant Grimes, whose company, eyescream interactive of Portland, Ore., designs marketing campaigns for Web sites.

"The Web is going to change and drive what happens," Grimes says. "I don't know how much Microsoft is going to control that."

Possibly even Gates recognizes his vulnerability.

In July, he turned over responsibility for the day-to-day management of the Redmond, Wash., software giant to Steve Ballmer, an 18-year Microsoft veteran. Gates – the world's richest man, according to Forbes magazine – said he made the change to devote more time to developing software.

What the antitrust trial illuminates is how Microsoft initially missed the importance of the Internet.

To Matt Ginsberg, a software entrepreneur and research professor at the University of Oregon, that was a telling misstep. "I don't see any evidence that (Gates) is really technically gifted," he says.

"A visionary would have developed the first browser himself," Ginsberg says.

But aside from technical prowess, few dispute that Gates is a gifted businessman. He has built an organization that, at least to date, has demonstrated an amazing ability to shift gears.

Few large companies have a track record like Microsoft's, argues Christopher Locke, whose Web-zine, Entropy Gradient Reversals (www.rageboy.com), provides commentary on industry trends.

"(Microsoft) is vacuuming the planet for intellectual capital right now; they're finding the best and brightest," Locke says. "I don't think it's Gates so much as his major role in building the kind of organization that is viable. ... There is something about that model that seems to work. The people who have been brought in under that umbrella have a lot of impact."

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Barcode

Dr. Laura powerless on photos

There's no stopping data once it's posted



DAVID PLOTNIKOFF
MODEM DRIVER

This column business is, by its very definition, a subjective exercise.

This particular column is going to be even more subjective than usual. So the full disclaimer applies: The hypothesis has absolutely no basis in market research. It has not been tested or validated by any third party. It is only an offhand observation, a hunch, a riff. Use at your own risk. Keep away from open flame. Got it?

As I noted a few months back, the Web is an unstable medium patently unsuited for archival purposes. It is the nature of cyberspace that vast resources appear and disappear without warning. The good stuff does not stick around for long.

Alexa Internet, a San Francisco firm that maps and mines great expanses of the Web, figures the lifespan of the average Web page is just 77 days.

It's only lately that I've come to notice a parallel phenomenon. Although the stuff you need is gone faster than you can say "404 — file not found," it seems to me that the stuff nobody needs has a half-life surpassing that of nuclear waste.

When I am in my dotage, holding forth in a ratty bathrobe on the porch of the Old Columnists Home, you can bet that someone, somewhere will be spamming the globe with the latest

iteration of a chain letter about a dying boy named Craig Shergold who needs business cards. Long after you and I have logged off this mortal coil, the Neiman Marcus cookie recipe will live on.

Let us consider the recent Web-based woes of Dr. Laura Schlessinger. According to news reports, a former lover-mentor of Dr. Schlessinger sold a dozen compromising photos of her to Internet Entertainment Group, one of the top porn publishers on the Web.

The 51-year-old radio talk-show host sued, seeking to block the firm from posting the snapshots, which were taken when she was 28.

A federal judge in Los Angeles initially agreed and issued a temporary restraining order. But then, as so often happens in cyberspace, things got very messy very fast. Five other sites not named in the suit reposted the same photos. Many other individuals uploaded the shots to various Usenet newsgroups.

The holier-than-thou harridan of the airwaves found herself in a rather uncomfortable position. Those photos had become a permanent feature of the electronic landscape, and no legal tool could remove them.

On Nov. 2, U.S. District Judge Dean Pregerson lifted his restraining order in the case. He said, in essence, that he wouldn't entertain further arguments about the closure of the proverbial barn door now that everyone had recognized that the horse was long gone.

As Derek Newman, general counsel for Internet Entertainment Group, explained, Dr. Schlessinger's case on invasion of privacy was no longer viable because "the photos were no longer private facts."

This is the part I find interesting. The law didn't care that third parties appear to have made private facts public — and did so illegally. Once things are widely disseminated, injunctive relief is unlikely. This is not a new concept.

But it does take on significance when applied to a medium that — unlike print or broadcast — affords any citizen the power to instantly duplicate and distribute "private facts" a million times over.

In practical terms, the lesson

Please see DEMAND on 3F.

MP

Demand building for faster surfing

Continued from Page 2F

seems obvious. If you're going to try to suppress content, you better do so before it's posted — and before it takes on a life of its own.

FAST TIMES: A new study by the Yankee Group found that a large segment of the online consumer market is warming to the idea of high-speed Internet connections in the home. The market research firm's survey of more than 2,000 U.S. households found that 41 percent of households that are online were very interested in high-bandwidth connections such as cable modems or digital subscriber lines. Forty-three percent were somewhat interested.

On money matters, the study found that 36 percent of the online households would be willing to pay $40 a month for high-speed service, up from 27 percent last year. Yankee Group says that figure is typical of the price for cable modem service nationwide.

LIFESTYLES OF THE LITERARY AND FAMOUS: As reported recently by *Salon* magazine, Amazon.com's database of best-selling books — the top 10,000 titles, updated hourly — has spawned "a dangerously addictive new literary sport." Authors in need of a quick ego boost have taken to checking their books' rankings day by day and, quite possibly, hour by hour.

Yes, it would be great to know that as of noon your opus had moved 18 positions past the pulpy treatise of your most-hated competitor. But it would be sheer torture to know that in the same span of hours, an anthology of children's letters to White House pets had just eclipsed you, Ernest Hemingway, Joan Didion and Marcel Proust.

If you're tempted to browse Amazon's Hot 100, the rankings are just off the home page under "bestsellers." To see the remainder of the top 10,000, you'll need to fish by title.

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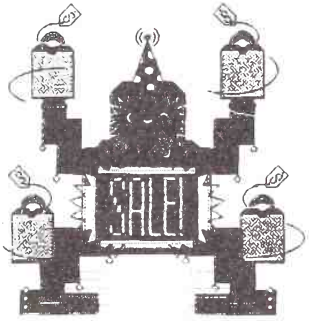
ECOMMERCE

Shopbot Pandemonium

As shopbots get smarter, their behavior may get dumber.

That is one striking discovery stemming from a series of simulations conducted by IBM that deployed "news brokers," a similar species of software agent.

Shopbots, of course, are the comparison shoppers of the Web, tiny programs that go in search of the products and services users request.



They've already become standard features at search sites like Yahoo!, Excite, and HotBot and at shopping networks like go2net's WebMarket. But once shopbots really proliferate and become better at finding what people want at the best possible price, they could trigger mindless price wars that ultimately hurt both buyers and sellers. "There's potential for a lot of mayhem once bots are introduced on a wide scale," says Jeffrey Kephart, manager of an IBM group that studies intelligent agents and similar phenomena. His mandate: Find ways to avert the coming chaos.

Today's shopbots are, as a rule, fairly stupid. They exhibit little or no ability to learn (either about user preferences or changing market conditions), rarely communicate or negotiate with one another, and usually just spit back a list of products sorted by make, model, or price.

In their simulation of a futuristic economy, researchers at IBM's Institute for Advanced Commerce in Hawthorne, New York, set up in-baskets for 10,000 buyers of news articles. About 500 news-broker agents mediated between the bots working on behalf of consumers and those representing about a dozen vendors, or publishers. The bots were instructed to purchase articles from a publisher and sell them to consumers to maximize profits. The result: Periods of relative calm and brief prosperity for the publishers, punctuated by violent, sporadic price wars. In the cyclical bouts, two or more sellers offering the same product (a set of news categories) kept undercutting one another until some or all of them bailed out. IBM's conclusion: The price wars could hurt not only sellers, by forcing disastrous price slashing, but also buyers, because sellers soon retreat from the general market into narrow niches.

Kephart is most interested in what happens when the Web teems with billions of competing bots. If online sellers of everything from airline tickets and hotel rooms to insurance and mortgages want to remain in business, they will have to learn when to negotiate, when to hold firm, and when to negotiate a discount. To be successful in the future, he says, shopbots will have to become better at comparing qualitative aspects of various products, not just prices.

Software agents "make decisions and act on them at a vastly greater speed" than humans, Kephart and his team write. "But they are immeasurably less sophisticated, less flexible, less able to learn, and notoriously lacking in common sense." – *Evan I. Schwartz*

ECOMMERCE

Shopbots: Three Degrees of Automation

Pattie Maes knows her bots. And in speeches to audiences anxious about the fate of their online businesses, the MIT Media Lab professor and Firefly Network cofounder provides a handy way of categorizing the various shopping agents she believes will one day run our lives. Here's a look:

Type of Shopbot	What it Does	Who Offers It	Who Builds It
Product brokering	Alerts users to new releases or recommends products based on past selections or constraints specified by the buyer	Amazon.com, FastParts, Classifieds2000, Launch Media, and others	Firefly Network, Net Perceptions, PersonaLogic, BroadVision, and others
Merchant brokering	Acts as comparison shopper by collecting information about price and availability	Yahoo!, Excite, BargainFinder, WebMarket, pricelime.com, and others	Jango, Jungiee C2B/Inktomi, Frictionless Commerce, OptiMark, and others
Negotiating	Buys, sells, and bargains with other bots about multiple aspects of a transaction based on user parameters	No one yet, although auction sites function as such	In research phase: Kasbah, Tete-a-Tete (MIT Media Lab), AuctionBot (University of Michigan), and others

Beyond these, there are other new technologies that can function like a shopbot. Alexa Internet (*www.alexa.com/*), founded by Thinking Machines cofounder and WAIS inventor Brewster Kahle, offers a toolbar that floats beneath Web browsers. When activated, the bar provides users with additional information about the sites they're visiting. Info on where a site originates and what other users think of it, as well as links to other sites, qualifies the bar, in Maes's eyes, as a "recommendation engine" or "merchant broker."

BusinessBots, the brainchild of computer game industry whiz Moses Ma, act every bit the part of shopbots, only in the enterprise space – i.e., business-to-business. Ma is mum about rollout plans, but hints that BusinessBots will further automate things like bidding for outsourcing contracts. – *Brad Wieners*

BIOTOOLS

Tiny Tongs



Most of us remember poking around a frog's innards during high school biology with a pair of rusty tweezers. But imagine tweezers that let you grab not just a liver, but individual cells, or even snippets of chromosomes. Just such a device has been built by Katsuhiro Ajito, an NTT senior scientist in Atsugi, Japan. Ajito's nanotweezers can capture tiny pieces of organic material with the radiation pressure generated by a laser beam, while using the laser's scattered light to identify a sample's chemical composition. Just as today's surgeons poke and prod at a patient's major organs, tomorrow's may operate at the cellular level with nanotweezers, repairing us from our genes on up. – *Robert A. Metzger*

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Beyond HTML



BY MICHAEL FLOYD

XML Opportunities Knocking

Just in case the Kenneth Starr report has in some way overshadowed the goings on over at the World Wide Web Consortium (W3C), I'm here to tell you that xXML sells. Well OK, not just yet, but it will. Consider that Tim Bray, on XML day at the Seybold Conference held in San Francisco this past September, essentially said that while he didn't expect HTML to go away anytime soon, XML would eventually replace it. With 1.5 million Web pages born daily (according to Alexa Internet), it's easy to understand why HTML is here for a little longer. In fact, grandfathering out HTML will likely take years.

However, the interesting story behind XML is that it will likely take hold in areas that have little to do with the actual presentation of Web documents. And that's where the opportunities for XML developers lie. This month, I continue my discussion with Charles Goldfarb, the father of SGML and coauthor of *The XML Handbook* (Prentice Hall), to find where these opportunities are.

What other kinds of applications are we likely to see over the next year or two?

Well, that's a big list. There are a couple of dozen applications already.

I think you break them down in The XML Handbook *into four categories. One involves database.*

Well first, it's hard to say what's an application versus what's a technology or a mode of use. For example, the *Washington Post* has a "help wanted" kind of Web site that dynamically communicates with the Web sites of its advertisers to get the earliest notice of employment openings. They share the data in XML so the site doesn't have to understand the actual format of the data sources that it's dealing with. Now, when they finally deliver the data to a browser, today they're doing that in HTML because you don't have native browser support for XML. But all that interapplication communication going on at the server is done with XML. So do you call that a data processing application?

Yes, that's a basic question. How do you define application? There's a lot of gray area there.

That's the real point. A lot of our old boundary lines that we were forced into by older paradigms and tools are now breaking down.

Another area would be transaction processing.

Sure. Anything that you'd call message-oriented middleware (MOM). In the book I talk about MOM and POP applications. [POP] bring presentation-oriented publishing. [POP applications are] the traditional area that SGML got into first, because those were the people with the biggest need. But the MOM applications are going to drive the use of XML on the Web.

And how will that evolve?

It's already starting to happen. Let's say you're doing online business integration with a supplier. You know that you need to get certain information about his products and inventory status in order for you to do your thing. With XML, you don't need to know the format of his database or the protocols for dealing with it, as long as you have some way of requesting the data. That request could itself be an XML document. Then you get back the data as an XML document which, in fact, might have originated from several different tables on the supplier's database—and you're totally immune to any future changes that he may want to make in his own system. So, in effect, XML provides a system-neutral interface, not in the sense of an API, but in the sense of the data format that's being interchanged as a result of exercising an API. And then the API can get very, very small—just, Send_Document, Receive_Document. You figure out from the document type just what the user is asking or transmitting.

Another question I have involves electronic data interchange (EDI). In your book, you state that "EDI will no longer be behind by certain industries or the largest enterprises. It will become as ubiquitous as e-mail." Can you explain this rather bold assertion?

Before the Web, EDI required value-added networks (VANs)—you actually had to make arrangements for how the information was going to be communicated physically before you could even get started. That goes away with the availability of the Internet. Another problematic aspect of EDI is that the types of transactions all have to be defined in advance and agreed upon between you and your business partners. (Ed. Note: See "Business-to-Business E-Commerce," Web Techniques, *November 1998.*) Part of that is so that a transaction will have the force of a legal contract. But it also makes the message formats very rigid. You've got to renegotiate if you want to change anything. With XML, there's the potential of defining the document type—meaning the schema of the transactions. Then it's possible for individual companies to add information that's important to them, but isn't legally part of the transaction. That can be done in a way that doesn't compromise anything. By cutting down

the barriers to entry and getting everybody onto the same network, you no longer have to be a large, rich company to get into this game.

In looking for new development opportunities, who in your estimation will develop document type definitions (DTDs) and who will be DTD consumers?

Used properly, a DTD is simply a way for parties to express agreement on the meaning of what they're communicating. It isn't some outside set of imposed rules that forces you to slavishly do things in a certain way. People can't communicate unless they have some agreed-upon vocabulary to communicate with. The DTD is a way of letting people write down what that agreement is.

When you talk about opportunities for developers: In the SGML world, the major users have these enormous document collections, the structure of which in many cases is mandated by law, or by industry regulations that have the effect of a law. Because these are big, complex structures to begin with, expressing them formally as a DTD is a big deal. I don't see that being the case for these message-oriented middleware applications on the Web. You're dealing with smaller, simpler kinds of information structures. Expressing those—even expressing them well—in a DTD shouldn't be a big effort. I don't see that as a development opportunity. I think that the development opportunities are going to come in writing programs that will deliver in XML form information that's stored in some proprietary format; that is, maintaining an interface between you and the world at large in the same way that a proprietary networking system might translate things into TCP/IP.

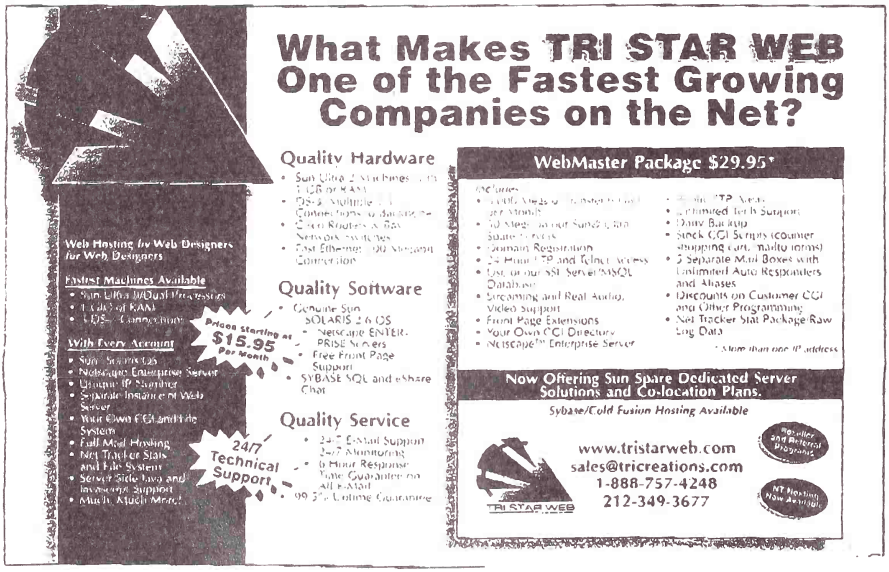
Why are parsers of such great interest right now, and how are they currently being used?

This is the toughest thing for someone who has only been using HTML to grasp. In HTML, the concepts of element and tag and formatting command (or processing command) are all woven together. There's no practical difference, given the way most people use HTML—that is, to get a particular visual result. In actual fact, though, because HTML is also SGML, under the covers these distinctions are being maintained. And they're important, because when the Web developer understands them, everything else unlocks. So, here's the point: You've got to think of what's in that document as being data elements, just as if they were in a database. So, you might have a data element that's a customer number.

What the tags are doing is therefore filling the same role as the schema metadata does in the database. The tag says, "the type of data element that this is, is `customer_number`." Just as in a database, the metadata doesn't say what to do with the data. It just says what it is. It gives meaning to that field. So, the content of the element—the stuff between the `start` tag and the end tag—is the data. The markup provides the schema information.

Now, the way you process it is in a separate thing called a "style sheet." You may have different style sheets for different purposes. I'm using the term "style sheet" very broadly. It may have nothing to do with the presentation style. It may have to do with the arithmetic you perform on a "rate of pay" data element. There's no reason to draw those artificial lines. Any kind of script you can reference from a dynamic HTML page, you can reference from a style sheet that's going to process XML. So we now have a chance to keep those three things separate: the abstract data; the markup that provides the metadata or schema information—that's what's in the tags; and then the processing stuff that's in your scripts that are invoked from the style sheet.

That XML document can be caused to use



the data just the way you might have used ODBC. Or, it can be presented (or parts of it can be presented) for display at a client browser just the way you use HTML. Or—and possibly the most powerful thing of all—you can just clip the marked-up text and incorporate it in some other XML document.

With a large base of well-tested SGML tools, why aren't we seeing more commercial XML tools such as editors, DTD generators, and authoring tools?

It's early. And I don't think creating DTDs is such a big deal for XML applications.

Because they'll be much smaller.

Yes. They're simple. They're just like laying out a spreadsheet table. If they're more complicated than that, you're probably doing something wrong. Which doesn't mean the tools aren't on the way, but it could mean that the vendors are not judging their market very well. There will be some market for people who want to do SGML-type things with documents and can't justify getting into full-scale SGML. But I don't think that's going to be the dominant market for XML.

There are a lot of XML parsers out there, most of them free—we probably have more than the world will ever need. Whereas getting the first couple of SGML parsers out was like pulling teeth. XML editors? There are a few already. You even mention a couple at your Web site.

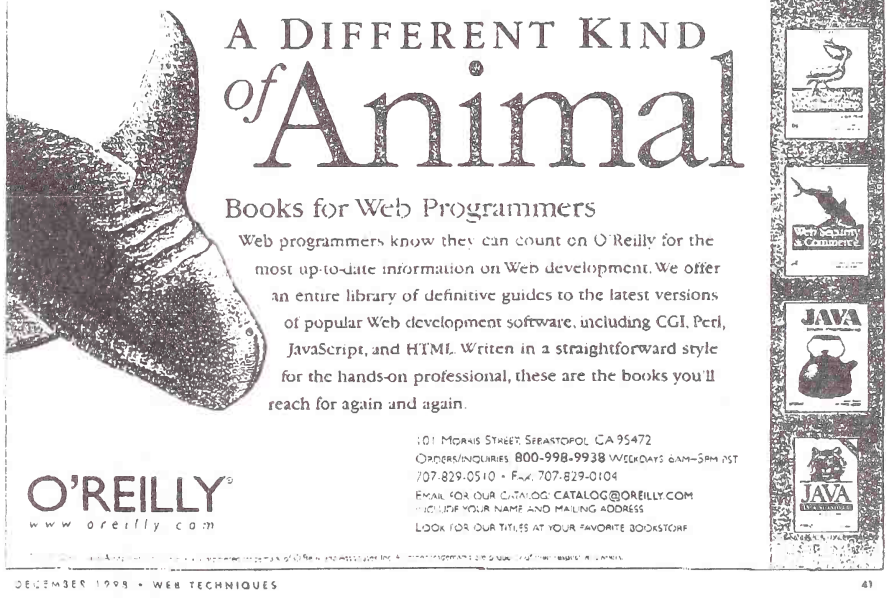
One last question. How do you view the state of XML today, and where do you see it going from here?

At this point in time, the world is being exposed to the buzz. Microsoft is out spending big bucks training people and making them aware of XML. But the real action is still with the major vendors and the major industry consortia. They're laying the framework that's going to make it possible, in six to eight months, for Web developers to start making use of XML in a big way. In the area of tools, I think you're going to see the most excitement in data-integration/middle-tier/application-server type tools—the things that make it easier for different Web sites to talk to one another. These tools will, for example, allow your Web site to act as though it were a client browser using some other Web site's data, and then to accumulate the results of that dialog along with other data that you collect, and send that all to (the user's browser) at once. That's what's new about XML, in terms of the Web. I mean totally new—not just differences in degree, the way the presentation-oriented stuff is.

So, what's really interesting and exciting here is that 98 percent of the XML data may turn out to be stuff that's written by a computer and sent to another computer for processing and then disappears. At the other end of the spectrum is the stuff that's been written by humans over long periods of time, and is intended for other humans to read. That's the traditional SGML POP application domain. XML is now scaled down to the point where it becomes efficient and sensible to do this other data-oriented, transaction-processing, MOM end of the application spectrum.

Before XML, data processing involved proprietary data formats that had to be negotiated between programs. These got so out of hand that we wound up making the data part of the programs and calling the result "objects." Now there's another way to keep data neutral and efficient, but at the same time restore its independence from the programming code. That's the promise of XML.

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BPA



Home Page

BOB KAEHMS

Web Apparitions

The old Web is as dead as a punch card. Mundie! I don't mean to say that I know of my own knowledge, what there is that is particularly dead about a punch card. I might have been inclined, myself, to regard an abacus as the deadest piece of information-age in the trade. But the wisdom of our ancestors is in the aggregate, and my tenderunto-mildred hands shall not disturb it, or the World's done for. You will therefore permit me to repeat, emphatically, that the old Web is as dead as a punch card.

Actually, it was. Old Marley, and a thousand times dead. But since this is nearly the end of the 20th century, I modernize.

And what three apparitions haunt me this Christmas? Permit me to close my eyes for a few brief moments... I'll connect.

Sound of modem dialing!

Apparition One presses the Back button.

It's Late 1998 and the URL is but a twinkle in Tim Berners-Lee's eye. I am working on a short video on groupware for Lockheed. Sitting across the table is Doug Engelbart.

Doug, are you surprised in how far the technology has come in the last 30 years since you first started working at augmenting users' intellect?

No, not at all. I knew from the start that the technology would continue to scale down and make it all possible.

Are you surprised at the human side of this continuum?

I thought we'd have come a lot further by now. It's as if we're huddled along the Hudson in small settlements, totally unaware of what lies ahead on the west expanse of the new world.

As we discuss philosophy, I sense my apparition becoming bored. It clicks through but not before creating a bookmark: www.tomstrap.org.

I'm now sitting with Terry Winograd.

Terry, what was the ripple effect of a wrap to program construction into a computer tool in April 1970? A monumental grandparent product with the potential to hold individuals accountable for their actions. How did it work?

It all depends on context, choice, and framing. The same technology can be used very differently in different environments. To the extent that some people just ignored the headers on a message and used it for straight e-mail. (The headers [chronicled such things as: "previous," "response," "continuation," and "comment.")

Apparition One is intrigued, but in a hurry bookmarks pedestrian sites and clicks through to How and Then (the unpublished edition) (www.the-unpub.com).

Damned, what should I have asked Doug and Terry, and how would you have answered?

How do you know what it works? When you have a successful, networked organization? You have to give a dedicated group of individuals the funding, resources, and time to invent it. You also need someone on the team who understands the peculiarities of the medium.

Apparition Two drags me back to the present. I wish he were sailing on the Indiana with his father.

Berners-Lee, have you learned anything from dealing with all the data? What's on the horizon? The paper disk drives.

That's on?

Disk storage is now $50 to $100 per gigabyte. We can store an entire snapshot of the Web online. With RAM prices dropping to $2 per MB, you can start work on it. In OS (4GB) at a reasonable cost. This has profound implications for data mining.

What about data mining? Have you learned anything profound? What about link analysis and new tools? Are they really working?

Yes. Consider the Starr Report (see: www.ok.ka.gov). According to our sample of 200,000 individuals, more than 15 percent, or one out of seven, viewed Starr's findings the first day they were released.

What does the future hold, Jack Starr, on a shining light? You be Apparition Three. Tell me.

Bob Kaehms

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Bacon's

Internet Librarian '98

ITI's second West Coast show provided a host of networking information and opportunities

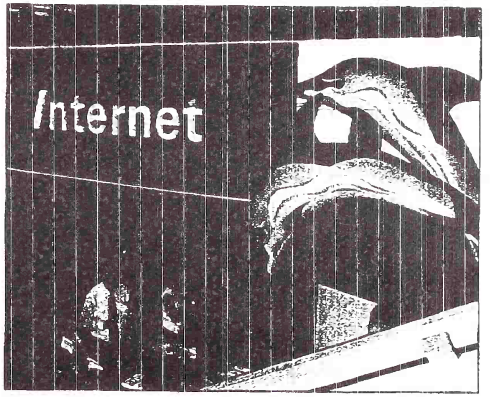
by Paula J. Hane

Last year I reported enthusiastically about the impressive debut and resounding success of the first Internet Librarian conference, sponsored by Information Today, Inc. (ITI). This year, I am pleased to report that the second conference, held November 1-5, again in picturesque Monterey, California, added more of everything—more participants, more exhibitors, more high-quality content, and best of all, more networking.

The "nothing but Net" gathering focused on information professionals and Internet-related technologies, and proved to be an appealing venue for discussing, learning, exploring issues and challenges, and stretching to new visions for our information futures. The conference attracted over 2,400 participants (including speakers and exhibitors, this is 400 more than last year), of which 1,400 were paid registrants, and provided a sold-out exhibit hall with over 90 companies.

The first 2 days offered preconference workshops—23 of them, on a wide variety of hot topics, covering intranets, Web authoring, searching and resources, knowledge management, training, and content acquisition. There was also a full day devoted to Internet@Schools '98, a new conference within a conference that focused on the impact of the Internet on K-12 librarians, media specialists, and technology coordinators. According to the conference organizer,

(continued on page 64)



Monterey, California, was the setting for the Internet Librarian conference again this year. The show attracted more than 2,400 participants, including 400 more paid registrants than last year.

FROM : ANTENNA GROUP
PHONE NO. : 415 896 1094
Dec. 15 1998 11:19AM P6

Internet Librarian '98

(continued from page 1)

Jane Dysart. "The school track was very successful its first time out, and we will likely expand it to 2 days next year."

Then, the full 3-day conference began, offering over 100 speakers in three concurrent tracks, providing 48 conference sessions, two evening plenary sessions, and a wrap-up panel chaired by immutable emcee and industry watchdog Barbara Quint. Plus, for those with enough energy, there were 3 days of exhibit hall time, two receptions with food and drinks in the exhibit hall, "Dine Around" groups that gathered to network over dinner at a number of the fine restaurants in the area, and even a post-conference "Internet Librarian Golf Classic." I don't know about the other participants, but I was tired by the end—though exhilarated by all I had learned.

Preconference Sessions

Many of the topics offered in the preconference workshops looked interesting to me and offered top-notch experts in their areas—and drew large numbers of registrants. Among the choices, one could hear Helene Kassler, library director at Fuld & Co., Inc., focusing on the creative uses of the Net for global competitive intelligence research. Howard McQueen and Jean DeMatteo gave a full-day seminar on intranet development for information professionals—and provided a 200-page handout (McQueen is editor of the newsletter *IntraNet Professional*, published by ITI.) These two themes—creative uses of the Net and librarians' involvement and leadership possibilities in developing structure and content for library and corporate intranets—were ones I heard loud and clear, echoed throughout the conference.

I attended the workshop on Managing Electronic Journals, which brought together publishers, aggregators, and users to address some of the management challenges. As a user myself, working for a publisher, I was familiar with some of the facts and viewpoints, but the session served to lay out the key issues quite well, and provided some valuable insights for working together. Several speakers addressed access issues (varying interfaces and formats, technical considerations), statistical issues (usage data, privacy), content issues (currency, completeness, image quality), licensing issues (standardizing definitions, multiplicity of contracts, ILL support), and, of course, pricing issues. Users want reasonable and predictable pricing, but generally do not understand the behind-the-scenes work involved for publishers and aggregators to produce journals in electronic format or the development costs required. Even when an aggregator is supposed to get SGML-tagged data, it may be implemented differently by publishers and thus arrive in many flavors. It seems we must all pay for entry into the Electronic Age with its enhanced features and capabilities.

Session Highlights

results sets and how Northern Light uses subject classification of metadata to sort results. She noted that the folder organization provided a visual overview of results, showing aspects of a topic.

The trend toward visual representation of data was picked up later in that track by Steve Arnold, who gave the audience a view of the future in discussing some of the developing products and trends that will give us the next generation of tools. I listened in amazement as he described and showed a tool from Cartia.com that automatically generates a terrain map of text or content, and mentioned products that provide multi-object display and others that let users fly into a visualization space. He also touched upon the use of new change monitoring agents for competitive intelligence, new interfaces, and image indexing. This was exciting stuff!

Here are some of the interesting Web sites Arnold mentioned. Since returning from the conference, I have gone to some of these sites and been fascinated by the technologies and the potential applications. Go have some fun with them:

- http://www.magnifi.com (track pictures and multi-object display)
- http://www.rtinews.com (Retrieval Technologies, Inc. for news)
- http://www.dailydiffs.com (Daily Diffs from InGenius Technologies, for change monitoring of content domains)
- http://www.muscat.co.uk (interface for the new version of DIALOG)
- http://www.cartia.com (ThemeScapes interface for terrain mapping)

Internet Librarian Golf Classic

by Thomas Hogan Jr. and Kathy Hogan-Bayer

The first annual Internet Librarian Golf Classic was held November 6, following the conference in Monterey, California. Over 30 golfers, including a good mix of attendees, exhibitors, and speakers, stayed in town to take advantage of the opportunity.

The event, co-sponsored by the Gale Group and West Group, was held at Quail Lodge Resort & Golf Club in Carmel. Nestled next to the mountains, Quail Lodge provided a picturesque and challenging backdrop for the tournament. Although threatening clouds sometimes passed overhead, the golfers stayed dry. The sunshine even broke through on occasion, warming an otherwise cool day. Refreshments on the golf course were provided by Hoovers, Inc., and a luncheon hosted by Gale and West followed the tournament.

Teams were composed of four players each, with the two better scores on each hole counting toward the total score. The winning team featured Jeff Sauls of the Gale Group who shot a 79 in tough conditions to help his team to victory. Ronald Hill of NewsEdge, Kirk Deminger of the Gale Group, and David Hamdorf of the Orange County Public Library also posted solid rounds for the team. (By the way, thanks to the Gale Group's success in the tournament, we and other Internet Librarian golfers

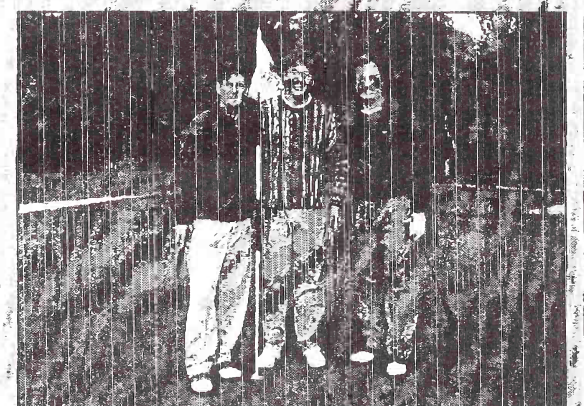
FROM : ANTENNA GROUP PHONE NO. : 415 896 1094 Dec. 15 1998 11:19AM P7

to the Gale Group's success in the tournament, we and other Internet Librarian golfers can expect that a sponsorship for next year's tournament will be considered.)

Prizes were also awarded for the longest drive, straightest drive, shot closest to the pin ... and shortest drive. The closest to the pin award, which was a new putter donated by Hoovers, Inc., was won by Laurie Hansen of the West Group. David Yaximishchak from Dow Jones walked away with a pair of prizes for the men's longest and straightest drives. Kathy Hogan-Bayer and Sue Hogan of Information Today, Inc. swept the women's prizes with the straightest and longest drives respectively. And lastly, the shortest drive competition was won with a tee shot that actually ended up behind the golfer. This golfer's identity is being protected for obvious reasons, but for the full story, contact Micromedex, Inc.

With the Internet Librarian conference moving to San Diego in 1999, a second annual tournament is sure to follow. As organizers of the event, we invite golfers interested in future events to contact either of us at the e-mail addresses below for further information.

Thomas Hogan Jr. is marketing director of Information Today, Inc. and can be reached by e-mail at thoganjr@infotoday.com. Kathy Hogan-Bayer is the meeting planner for Information Today, Inc. and can be reached at khbayer@infotoday.com.



Three members of the winning team at the first Internet Librarian golf classic, from left: Ronald Hill of NewsEdge, Kirk Deininger of The Gale Group, and Jeff Sauls of The Gale Group.

Session Highlights

There were certainly a lot of choices for sessions, offering something for everyone. The presentations seemed to fall into three types, providing a valuable balance and perspective. The practical how-to-do-it talks covered HTML, training, acquiring and managing content, Web design, usability testing, knowledge management implementation, etc. The issues discussions treated digital archiving, copyright and licensing, and metadata. The discussion of trends and forecasts gave us a look at next generation tools, Web developments, the future of library automation, and object-oriented design systems.

The track on metadata and Web tools brought me up to speed on some of the behind-the-scenes technologies and how they affect a user's ability to locate and interact with digital data. A speaker from Alexa Internet (unfortunately not Brewster Kahle, who was called to serve on a Presidential Commission), Brian Gilbat, described Alexa's project to archive the Internet and how Alexa is using metadata. The company also encourages librarian involvement, and is working to incorporate important information that is generated by librarians for their sites. He urged Webmasters to study their own usage logs to understand how to customize content.

Roy Tennant, a respected figure in digital library projects, defined metadata, discussed the types (descriptive, administrative, and structural), and some of the issues to be considered (what elements to capture, how to store it, how to make it available, object level vs. collection level metadata). This was followed by an excellent presentation by Joyce Ward, director of content classification at Northern Light, who delineated the techniques used by search engines to tame [illegible] interface for certain mapping).

I was impressed, as usual, with Reva Basch's view of the current Net environment, organized neatly around her "gratuitous buzzwords": aggregation, differentiation, and integration. She predicts we will see more use of "bots," collaborative filtering, and data visualization. Sue Feldman also discussed the features of some new search tools, and noted that it is time for information professionals to move beyond simple searching and into roles involving analysis and evaluation.

Well, I've used up my space and not touched on many other highlights of the show. Kudos are due to Jane Dysart, the organizing committee, and the conference management for a high-quality event with timely topics, a first-rate roster of speakers, and excellent arrangements. Participants were even treated to some fun and laughs in the two evening sessions and in the wrap-up panel—along with the serious stuff, of course.

A volume of conference proceedings and tapes of the sessions are available for purchase from Information Today, Inc. (800/300-9868). The company Web site (http://www.infotoday.com) has the conference schedule of sessions, with links to exhibitors and speakers, and with links to sites providing many of the electronic resources used in speakers' presentations, including outlines and PowerPoint slides. Next year's Internet Librarian conference will be held November 8-10 at the San Diego Concourse, San Diego, California. The IT Web site will have a call for papers, and a schedule as it develops. See you in San Diego!

Paula J. Hane is contributing editor of Information Today. Her e-mail address is paula.hane@cwix.com.

FROM : ANTENNA GROUP PHONE NO. : 415 896 1094 Dec. 13 1998 11:21AM P8

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EN LA RED

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Netsite http //popularmechanics.com/

Antes de continuar con la reseña del *software* necesario para utilizar Internet en forma eficiente, quiero hablar sobre el problema de las computadoras en el año 2000, ya que algunos lectores me han pedido que ahonde en este tema.

Navegando por la Red encontré mucha y muy variada información al respecto, la cual organicé en forma de preguntas para su mejor comprensión.

¿Cuál es el problema del año 2000?

Algunos programas de cómputo —sobre todo el lenguaje de programación COBOL, que fue ampliamente utilizado cuando se instalaron la mayoría de las bases de datos utilizadas hasta la actualidad— sólo permiten usar dos dígitos para registrar el año de una fecha, por ejemplo, 85 en lugar de 1985. Por tal motivo, en estos programas el año 2000 será representado por los dígitos 00. Esto provocará que, al involucrarse una fecha, los cálculos matemáticos en que ésta intervenga sean incorrectos. Por ejemplo, si un programa de contabilidad necesita calcular los recargos en los impuestos desde 1995 hasta el año 2000, lo que normalmente hace es restar 1995 a 2000, o sea, 2000-1995 = 5. Pero si el programa sólo permite anotar los dos últimos dígitos del año en curso, la operación será 00 - 95 = -95, lo que dará un resultado erróneo de 95 años de recargos. En otras palabras, equivaldría a haber regresado a inicios de siglo. Un ejemplo común y que, aunque exagerado, ilustra la gravedad que tendría el problema de no solucionarse a tiempo, indica que los registros de una persona nacida en 1945, al confundirse, podrían dar a entender que nació en 2045 —esto es, que todavía no nace.

Los desarrolladores de programas utilizan varias reglas para determinar cuáles son los años bisiestos. Lo son si el año es divisible entre cuatro y entre 400, pero no lo son si es divisible entre 100, aunque también lo sea entre cuatro.

Aplicando estas reglas, aparentemente el año 2000 no es bisiesto, pero en realidad sí lo es, pues es un caso especial que sólo ocurre cada 400 años.

Algunos sistemas y programas sí permiten usar cuatro dígitos para representar la fecha y sí identifican cuáles son los años bisiestos. Sin embargo, en el caso del año 2000, que sí es bisiesto, estos programas son incapaces de identificarlo. Por esta razón todas las fechas después del 29 de febrero del 2000 serán incorrectas por un día.

Podría pensarse que el problema es fácil de resolver; y de hecho lo es. La solución está en modificar el código fuente de los programas para que acepten cuatro dígitos en la fecha. Esto lo puede hacer un programador sin mucho esfuerzo. Sin embargo, existe un número enorme de sistemas afectados, lo cual dificulta poner en práctica la solución. Un banco, por ejemplo, tiene una gran cantidad de computadoras y aplicaciones susceptibles a ser afectadas por este problema.

¿Por qué existe el problema?

El problema se generó porque en los inicios de la computación la memoria de los sistemas de cómputo era demasiado cara, por lo cual las empresas programaban utilizando sólo dos dígitos para representar las fechas, ya que esta instrucción se repetía innumerables veces a lo largo de la aplicación. Esto les significaba mucho dinero. Además, no se esperaba que el *software* y los sistemas desarrollados en esa época (principios de los años 70) duraran hasta ahora.

Otra razón puede ser sociológica, ya que muchas veces las fechas se representan con sólo dos dígitos.

¿Cuáles son las consecuencias?

Aunque es difícil predecir las consecuencias que pueda ocasionar este problema, éstas pueden ir desde una caída parcial del sistema hasta una total. En casi todos los negocios existen gran cantidad de computadoras que serán afectadas.

Parece mentira, pero la mayoría de las personas que trabajan para resolver el problema prefieren una caída total, debido a su naturaleza tangible. En una caída de este tipo se pueden implementar acciones inmediatas. En cambio, una caída parcial no es tan fácil de identificar, y puede tener consecuencias más graves, ya que al no percatarse de las fallas, el usuario sigue utilizando el sistema y éste puede estar generando resultados equivocados, hasta que el error sea evidente y haya traído profundas consecuencias negativas para la empresa.

des estadounidenses señalan el surgimiento de dos nuevos cárteles mexicanos de droga. Uno, con base en Tijuana, está ligado a la "élite mexicana bien educada", mientras que el otro opera desde Guadalajara con el apoyo del Cártel de Cali. Aunque uno de los líderes de Tijuana es asesinado, dicho cártel extiende sus fuentes de abastecimiento en Perú, Bolivia y Ecuador. En EE.UU. se realizan decomisos importantes al grupo de Guadalajara, gracias a información proporcionada por sus rivales.

Un nuevo y carismático líder gana la elección presidencial de junio del 2002 en México, aprovechando la ira popular provocada por las duras bajas de civiles producto de la guerra de drogas mexicana, que se incrementa con rapidez. Desde su toma de posesión emprende una campaña importante contra el Cártel de Guadalajara.

A principios del 2003 las autoridades de ambos países descubren que las operaciones de lavado de dinero del Cártel de Tijuana se concentran en productos tipo SmartCard que almacenan dinero y servicios de pago por Internet. Mientras tanto, fracasan las reformas al sistema bancario emprendidas por el nuevo presidente y en diciembre del mismo año *hackers* de ambos cárteles piratean las redes informáticas del gobierno mexicano.

La crisis estalla en febrero del 2004. Las autoridades de Tijuana descubren que los zares del lugar ofrecen hasta 15% de descuento en cualquier compra de droga hecha con SmartCard. Para complicar más las cosas, una guerrilla autodenominada Frente de Liberación Nacional Maya lanza una ofensiva en el sur de Yucatán. De acuerdo con los servicios de inteligencia estadounidenses, sus armas son adquiridas con dinero del Cártel de Guadalajara.

A fines de marzo un resperado corredor de Wall Street afirma que la inestabilidad mexicana podría conducir al país a figurar en la "lista de peligro económico." Durante la siguiente hora el peso pierde el 10% de su valor. El presidente del FMI identifica al lavado de dinero como la principal causa de la inestabilidad del peso mexicano y propone un plan de rescate, condicionado a la adopción de medidas que elevarían el sistema mexicano de ciberpagos a los estándares de protección de divisas y prácticas contra lavado de dinero de Estados Unidos y la Unión Europea. El presidente mexicano pide un mes para estudiar a fondo esa propuesta, que es atacada por las cadenas televisivas argumentando que los banqueros de los Estados Unidos y de Europa están tratando de adueñarse de la economía mexicana.

El espionaje electrónico y la inteligencia artificial permiten a los Estados Unidos descubrir un sistema complejo de lavado de dinero que explota varios sistemas SmartCard. El *modus operandi*, que es inédito, también usa métodos de codificación avanzados y enlaces móviles vía satélite para transferir dinero a una serie de cuentas de banco, y para comunicarse con una compañía fantasma de Phoenix que tiene nexos con el Cártel de Tijuana. Un programador de tecnología SmartCard le revela al FBI que ha encontrado un virus en una tarjeta de uso común. El periódico *Washington Post* esgrime fuertes razones para pensar que uno de los principales bancos de la ciudad de México es controlado por el Cártel de Guadalajara y está profundamente involucrado en actividades fraudulentas que contribuyen a minar la seguridad del sistema mexicano de ciberpagos.

En el Congreso de los EE. UU. los representantes de California, Arizona, Texas y Florida exigen una intervención militar contra los cárteles de droga, en colaboración con el gobierno mexicano. Sin embargo, el presidente estadounidense apoya la propuesta más "moderada" del FMI. En México se habla de una oferta de paz del Cártel de Tijuana, cuya condición es el rechazo al plan de modernización de ciberpagos propuesto por el Fondo. Los servicios de inteligencia estadounidenses descifran un mensaje del Cártel de Guadalajara dirigido a sus aliados de Cali en el que se dice que la "Operation Fire God" (Operación dios de fuego) debe lanzarse tan pronto como sea posible.

A fines de junio la policía londinense detiene a un grupo de financieros que está a punto de comprar el tercer proveedor británico de acceso a Internet, con el objeto de reforzar la infraestructura del Cártel de Cali en Europa. El cuarto de julio los suizos se enteran de un plan de desestabilización auspiciado por los cárteles de Guadalajara y de Cali, que prerende derrocar al gobierno mexicano: "Se reportó que el plan incluía intentos de manipular la bolsa mexicana, el sistema de ciberpagos de dicho país y el valor del peso." La maniobra consiste en transferir lo antes posible los fondos de ambos cárteles a bancos europeos y asiáticos. El 14 de julio la Agencia Antidrogas de los EE. UU. se da cuenta de que el Cártel de Guadalajara ha distribuido U.S. $200 millones para comprar el apoyo político de elementos del gobierno mexicano que están descontentos. El 15 de julio el presidente estadounidense convoca a una reunión de los principales servicios de combate a las drogas involucrados, para discutir las medidas que deben tomarse. El siete de agosto las autoridades panameñas detienen un importante cargamento de armas en Colón.

Aquí termina la "historia futura" y comienza el ejercicio preparado por la Rand que invita a los participantes a manifestar su opinión en el marco de esta crisis hipotética. No hay que olvidar que se trata de una ficción (en su forma posmoderna de juego o simulación) pero, lejos de pretender que no existe relación con una situación existente, los autores se han esforzado para que su escenario sea muy plausible.

Ellos llegaron a dos conclusiones: la primera es que los sistemas de ciberpago podrían socavar las estrategias actuales contra el lavado de dinero; la segunda es que este asunto tiene alcance internacional. Podrían haber seguido una ruta más directa para llegar a este resultado, pero seguramente se divirtieron mucho durante el recorrido.

enced and novice searchers. But Northern Light has the edge for power searchers because it can match many of HotBot's advanced search features, and its Custom Search Folders are better at steering you to the results you want from a results set of generally comparable quality.

Lycos acquired HotBot in its purchse of Wired Digital, but HotBot will retain its identity and features.

In addition to supporting Boolean syntax, wild cards, and case-sensitive searching, HotBot also offers a variety of filtering options, including media type, page depth, and pornographic content. All the search features can be set through drop-down menus and radio buttons—or you can bypass the interface assistance and construct your own queries using standard Boolean syntax.

HotBot typically does quite well on simple keyword queries if the terms are fairly specific, such as *guerrilla marketing*, but it is less adept than Yahoo! at searches on more general or common terms. To address this, HotBot recently integrated the Direct Hit Popularity Engine, which supplements your results set with a helpful list of the ten most-visited sites for your query.—*Nancy Sirapyan*

Infoseek

www.infoseek.com A lackluster and often inconsistent search engine, Infoseek really doesn't have much to distinguish it from its many competitors. Its returns are average at best, and its most notable features can be found at better search sites. Around the time you read this, Infoseek will become part of a larger portal, orchestrated by Disney, its significant investor, called Go Network (*www.go.com*). Infoseek will be the search and navigation arm of Go.

Simple searches on Infoseek yielded mixed results. Sometimes we got great results, as in our search for *Dobsonian telescopes*. Sometimes our results were technically relevant but of poor quality; we got mostly links to entertainment pages on our search for *Kissinger*. And in our search for *Alliance90/Greens* (a German political group), we got only three sites, and they were barely relevant.

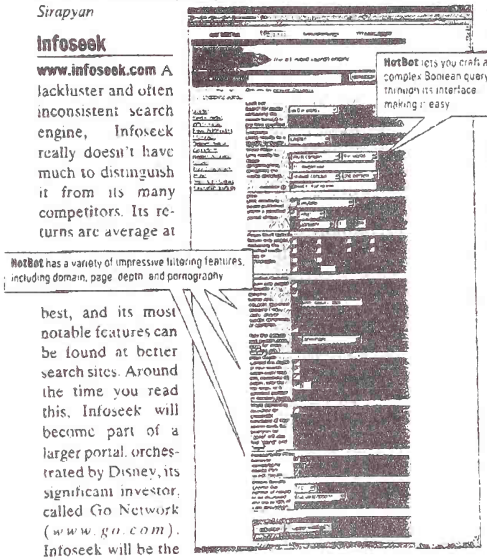
Using the advanced search option right from the start is the way to go if you plan to use Infoseek at all. On the whole, queries submitted using the Advanced Search form do a better job of finding useful information than the simple search does.—*DW*

LookSmart

www.looksmart.com Navigating your way through LookSmart's directory of subjects is a good way to find some of the most popular sites on the Web within major categories. Although its hierarchical design is easy to use and a refreshing change from other search sites, the deeper you go, the faster you'll realize that LookSmart's content is lacking when compared with that on Yahoo!

As an example, when we searched on the keyword *hydroponics*, LookSmart returned 17 category hits all of which were relevant sites. The same search at Yahoo! returned 6 category matches and 156 site matches.

You can start with a keyword query if you can't find what you want in the categories. Your first returns will steer you into LookSmart's categories, and subsequent returns will be from the entire Web courtesy of AltaVista's search



Search While You Surf

Whither search engines? If two companies—one being Web stalwart Netscape Communications Corp., the other a start-up named Alexa Internet—have their way, Yahoo! and all the rest will be obsolete.

In the latest version of Communicator (4.5), Netscape has introduced Smart Browsing, which lets you type common terms into the location field, then sends you to the site w

Alexa steers you to links related to where you're visiting, even pages deep into a site

RELATED LINKS for www.zdii.com that URL or

The most relevant Netcenter department.

Alexa (*www.alexa.com*) is a free utility for either Netscape Navigator or Microsoft Internet Explorer that provides you with statistics, such as company location, on the site you're viewing as well as a list of ten related links. Communicator also includes Alexa's list of ten related sites in the form of a feature called What's Related. What's Related functions as a companion feature to Smart Browsing without needing the Alexa utility.

Though the new browsing enhancements built into Communicator are definitely smart, they're not always wise, except when it comes to keeping you firmly planted on Netcenter soil. Typing *Motown* for example will send you to the Motown site, but usually your entries will send you to Netcenter, which may not necessarily be what you had in mind.

Alexa 3.0, which we looked at in public beta, generally found us relevant links no matter where we were on the Web, but Alexa's far from perfect. We were impressed that we could often get related links on a page-specific basis (go to the Inter@ctive Investor section of ZDNet and get links to other financial sites, not computer sites), but we found that Alexa wasn't yet smart enough to steer us to sites related to content on personal home pages like GeoCities.

Though certainly no replacement for searching heavyweights such as Yahoo! and its siblings, Alexa and Netscape's Smart Browsing are handy and can cut down on the dross that often accompanies traditional Web searching.
—*Sarah L. Roberts-Witt*

FROM : ANTENNA GROUP PHONE NO. : 415 896 1094 NOV. 18 1998 09:57AM P3

CIO

DECEMBER 1, 1998

Bacon's

CONTENT THAT KEEPS VISITORS COMING BACK

THE MAIN ATTRACTION

Branding Tall

Is your business positioned to be top-of-mind in the age of the Web?

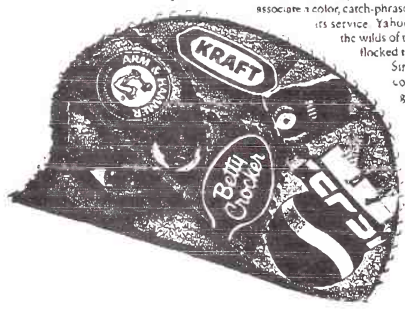
BY SCOTT KIRSNER

Pencils out! Books closed! It's time for a pop quiz...
1. What color do you think of when you think of IBM?
2. What animal comes to mind when you hear the word cigarette?
3. What food do you associate with Aunt Jemima?

IF YOU ANSWERED BLUE, A CAMEL AND PANCAKES, CONgratulations: You've been imprinted. International Business Machines Corp., R.J. Reynolds Tobacco Co. and Aurora Foods Inc. have burned their brands into your brain, thanks to years of repetitive advertising. ("I'd walk a mile for a Camel.") Branding, for these old-line companies, meant sending out endless visual and textual messages to the consumers of the world, all in the hope of generating a positive aura around their products.

Branding on the Web means something entirely different. Understanding the difference and acting on it will separate the dominant brands in a given category from the also-rans. Offline, branding is about crafting a careful image that potential buyers then passively consume. Online, branding is about an experience. And it's active. Look at the two best-known brands on the Web: Yahoo and Amazon.com.

Yahoo Inc. made its name by providing a friendly, easy-to-use navigation service. It didn't need to spend millions getting you to associate a color, catch-phrase or character with its service. Yahoo simply civilized the wilds of the Web, and users flocked to it as a result.



Similarly, Amazon.com Inc. offered a gentle introduction to the world of electronic commerce. Put a book in your shopping cart, head for the register and *voilà!* there it is at your door a few days later. The experience was so painless and convenient that users became brand-loyal.

Nick Rothenberg, a managing partner at the Los Angeles offices of Reinvent Communications Inc., says it best: "Branding isn't just about image anymore. Everything you do online is part of the brand-building experience."

That said, here are my six cardinal rules for building a winning brand on the Web.

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Have I missed one of your cardinal rules for becoming a killer Web brand? Please clue me in. CIO

Scott Kirsner is a Boston-based writer and consultant. He can be reached at kirsner@worldnet.att.net.

THE MAIN ATTRACTION

CONTENT THAT KEEPS VISITORS COMING BACK

Branding Tall

Is your business positioned to be top-of-mind in the age of the Web?

BY SCOTT KIRSNER

Pencils out! Books closed! It's time for a pop quiz....
1. What color do you think of when you think of IBM?
2. What animal comes to mind when you hear the word cigarette?
3. What food do you associate with Aunt Jemima?

IF YOU ANSWERED BLUE, A CAMEL AND pancakes, congratulations: You've been imprinted. International Business Machines Corp., R.J. Reynolds Tobacco Co. and Aurora Foods Inc. have burned their brands into your brain, thanks to years of repetitive advertising. ("I'd walk a mile for a Camel.") Branding, for these old-line companies, meant sending out endless visual and textual messages to the consumers of the world, all in the hope of generating a positive aura around their products.

Branding on the Web means something entirely different. Understanding the difference and acting on it will separate the dominant brands in a given category from the also-rans. Offline, branding is about crafting a careful image that potential buyers then passively consume. Online, branding is about an experience. And it's active. Look at the two best-known brands on the Web: Yahoo and Amazon.com.

Yahoo Inc. made its name by providing a friendly, easy-to-use navigation service. It didn't need to spend millions getting you to associate a color, catch-phrase or character with its service. Yahoo simply civilized the wilds of the Web, and users flocked to it as a result.

Similarly, Amazon.com Inc. offered a gentle introduction to the world of electronic commerce. Put a book in your shopping cart, head for the register and voila! there it is at your door a few days later. The experience was so painless and convenient that users became brand-loyal.

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Find It Online

Alexa Internet
(http://www.alexa.com/)

Amazon.com
(http://www.amazon.com/)

Borders.com/
(http://www.borders.com/)

Chip Shot Golf Corp.
(http://www.chipshot.com/)

golf.com
(http://www.golf.com/)

GolfWeb
(http://www.golfweb.com/)

iGolf
(http://www.igolf.com/)

Panmedia Corp.
(http://www.panmedia.com/)

Southwest Airlines Co.
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It's a Small World Wide Web

Omar Wasow on Sixdegrees.com, the Web's Latest Networking Tool

ESSAY
12.03.98

▶ Printer-friendly version

RAGEBOY DECLARED WAR. And not just any sort of war mind you, a "Holy Jihad." His opponent reached out in a loving gesture declaring Rageboy a "Life Partner," but rather than be lulled into amorous complacency, Rageboy demanded "the head of Carl Steadman!" In a flash of jealousy, Rageboy, aka Chris Locke, publisher of the fringe ezine *Entropy Gradient Reversals,* set out to prove that FEED and *Industry Standard* columnist Carl Steadman was, gasp, Less Popular. Moments later, the typically cozy online community of sixdegrees was transformed into a battleground in an all out war of attrition. Or was it attraction?

Sixdegrees, as the name implies, is a site built around the idea that everyone in the world can be connected to everyone else by no more than six intermediate friends, relatives and acquaintances. Though sites riffing off of the same concept have been on the Net for years, "Six Degrees of Kevin Bacon" and the variations thereof were never serious attempts to map the human interconnections of the world. Sixdegrees, on the other hand, set out to build a human genome project for the business card set. The basic idea being if you built a huge database and got enough bored people to type in names of all their assorted contacts then the otherwise abstract and ethereal notion that only six relationships might separate any two strangers would suddenly be tangible.

CYBERIA

"They say that everyone on the earth is connected to everyone else through a path of six people or less," observes the Six Degrees of Separation site. "This concept, explains playwright John Guare, is 'not philosophical or poetic. It's a statistical theory, based on the wireless [telegraph] of the inventor, Marconi, who surmised that by the time the country would be connected by the wireless, we'd be able to find anybody on the planet by connecting through 5.83 people.'"

To the uninitiated, sixdegrees works like a virtual stone soup. You remember the story: three hungry soldier vagabond's roll into town and, having no success begging, announce with great fanfare that they are making stone soup. The soldiers then combine water and rocks in a cauldron and slowly lull the greedy townsfolk to donate a little salt here, some carrots there and before too long, everyone is happily feasting on a stew of epic proportions,

which of course was the vagabonds goal from the outset.

Like stone soup, and much of what is unique to the net, sixdegrees, depends entirely on the active participation of a community. Just as Linux does not exist outside the open-source coding community, and just as collaborative filtering agents like MyLaunch and the site referral engine Alexa are useless without the input of thousands of web surfers, sixdegrees is an empty shell without the shared experience of thousands of individual users.

CYBERIA

The populatity of "Six Degrees of Kevin Bacon" suggests that Hollywood movies are American culture's common currency. The game has spawned a host of other versions centered around stars like Arnold Schwarzenegger and Elvis Presley. To maximize your gaming prowess, check out The Oracle of Bacon.

HAVING RUN a small online community for years, though, I know all too well that they often function more like gym-memberships than small towns. Even successful online communities -- such as AOL or the Well -- are notorious for generating a born-again nationalism upon arrival followed by rapidly waning interest. The genius of products like Linux or Alexa is that the participatory possibilities of the Net have been harnessed in a sufficiently systematic way as to sustain these enterprises. In each case, the participant offers a little of him or herself and gets a little in return. As in all participatory online activities many users are just passing through, but their brief contributions nevertheless remain and sustain value, however modest.

Like the vagabonds of "Stone Soup," numerous Web entrepreneurs have bet their lunch on the hope that they can motivate a community to believe or "buy" in to their concept and elevate it from theory to practice. For better or for worse, most remain hungry. Extended communities of users are like fragile ecosystems prone to collapse from the threat of user-exodus or the attraction of competing communities. As writer Jerry Michalski has said in the past, you don't build a community, you join one. How a for-profit business convinces others to join in the barn raising too often remains a riddle. The only way to escape from the precipice of perpetual extinction is to reach critical mass.

LOOP

12.7.98
139.1.6
RageBoy: gopher jealously

For sixdegrees, you could mark that moment with the Chris-Carl clash of the titans. Though I've been on the service for more than a year and a half, it wasn't until recently that I noticed the "confirm this relationship"

So Carl, how many did you get? I bet I trapped more gophers than you ever did!

LOL

RB

email arriving with any regularity. I first joined the service in March of 1997, and after a brief flirtation, decided I wasn't interested in spamming my friends with endless solicitations of an only slightly modified version of the elementary school refrain "I'll be your best friend." In particular, I wasn't sure what the netiquette of such interactions was.

Recently, however, two things appear to have changed. First, the folks at sixdegrees have gotten smarter about restricting the outflow of emails. This allows users to sign up friends without feeling like recruiters for a tupperware party. Second, and more importantly, the netiquette of sixdegrees has evolved. To be exact, where once it seemed like posting your rolodex to the world was laughably unhip, now all sorts of netterati types are actively competing for the biggest contact list on the block. Folks like Chris and Carl, who have each spent years cultivating their reputations for contrarian insouciance, have recently crossed the line from diffident account-holders to shameless contact-mongers. And though Chris and Carl are clearly goofing with the system -- Carl is busy signing up everyone as a "Life Partner" and Chris has slacked off since "Beating Carl!" by some 277 contacts to Carl's measly 171 -- in the last couple of months, friends have mentioned that sixdegrees keeps popping up in cocktail chatter at parties, reunions, and even analog-world art openings and book parties.

CYBERIA

The Salon article Six Degrees to Nowhere is an entertaining rant on the sixdegrees site. "It's a concept without a reason to live: that everyone in the world is connected by six people. Yes, the person serving you that juicy Big Mac at McDonald's may be your friend's roommate's cousin's co-worker's boyfriend's sister. OK, but so what?"

PARTICIPATING in the site is like a weird cross between collecting baseball cards and trying to sell Amway (or one of those other pyramid schemes where the goal is to get everyone you know to sell to everyone they know). Yet unlike swapping a Joe Dimaggio for a Jackie Robinson, in sixdegrees, you negotiate and swap relationships. In "people surf" mode you can actually browse through your contacts, your friends' contacts and so on to see how many people they have listed as relations. The logic of the process is infectious. More than once I found myself thinking "I don't know him well, but hey, he's got 87 contacts! How could I pass that up?" Like

hey, he's got 87 contacts. How could I pass that up? Like the worst aspects of high school, you yearn to establish relations with people who have a lot of contacts but inevitably find yourself surrounded by low-status members with few contacts. New acquaintances are simply fresh meat who quickly become sixdegrees entries to boost one's online sphere of influence and hence attractiveness. As the sixdegrees addiction sets in, you begin to seek out the friends of your friends who can deliver big chunks of contacts to your extended tree. In a message titled "six hundred degrees," one friend emailed me: "Omar, you're putting us all to shame. 118 1st degree contacts! I'm going home and listing everyone in the phone book as my friend."

DIALOG:

"Up until recently, communities were rooted in neighborhoods and fostered in certain kinds of places or they evolved from an issue that brought believers together," begins this FEED Dialog on Virtual Communities. "These kinds of communities, though founded on a particular issue or common faith, traditionally occupied distinct spaces: political rallies and marches on Washington, churches, mosques and synagogues. In virtual communities, where space becomes a metaphor and emotions become icons, what happens? What is gained? Does the electropolis entail a loss of intimacy or offer a quicker route to it?"

Still there's a lot of room for improvement. The service has a hair-trigger for logging users off. At peak hours it crawls. The instant message feature is more of an aggravation than an invitation and I seriously wonder who shows up for a chat with "Linda Sivertsen, formerly the owner of one of the most successful dog walking businesses in Beverly Hills..."

Moreover, it's hard to imagine that banner advertising can support the service. While their content and marketing costs can't be too high -- the big plus of community driven sites is that your audience generates the content and buzz -- the coding and maintenance costs must be massive. Sixdegrees seems better suited as a mechanism for building customer loyalty for otherwise interchangeable search engines rather than as a premium outlet for ads. Yet if sixdegrees is acquired by AOL, Yahoo! or MSN certain other problems immediately follow. While a natural fit with AOL, the service might explode in user activity (imagine every buddy and ICQ list automatically entered), it would certainly lose whatever early-adopter hype it is generating now. Similar concerns would plague the company at Yahoo or Microsoft with the added caveat that a lot of folks would balk at the notion of detailing any of their human interactions to a Bill Gates owned database. Currently the site has a TRUSTe reviewed privacy statement, but if people got nervous when Windows 95 uploaded a software registry of their hard drive to Microsoft, they're not likely to be more receptive when asked to upload their social registry.

Further, why all these people are spending surplus social capital on an obscure Web site remains something of a mystery, even to the most active members. As Chris wrote recently about sixdegrees and the joy of being quoted in big media: "you get this feeling that you're part of what makes the world go round, that you're at the livewire happening center of all things. It's more addictive than heroin." But of course "after the metaphorical 15 minutes of that action, trust me, the web is a crashing comedown." Valley gad-about and writer Guy Kawasaki once noted that any actively maintained database starts to feel like a living thing that demands constant care and feeding. In the short run this can be a pretty gratifying feeling. In the long run there's got to be a payoff. For example, if I could extract data as easily as I input it, the service, like PlanetAll, might legitimately become a compliment to my ongoing struggle to keep three or four different electronic organizers and rolodexes synchronized and up-to-date.

CYBERIA

The Globe, one of the newer Web communities, is a typical space for Internet networking. With discussion forums dealing with everything from current events to cooking and chat rooms like "Hot Tub" and "The Screwdriver Lounge" for the more adventurous, you're sure to find something to pique your interest.

Or maybe, in the wake of the Chris-Carl bloodbath, sixdegrees should abandon any pretense of utility and institute brutal competition throughout the site. It could give new meaning the to the term "contact sport." Imagine one-on-one networking death matches as a geek technique for establishing alpha-male dominance. Say what you want about the site, about the absurdity of hustling your every human relation, about the utter pointlessness of participating in a ponzi scheme, when all is said and done, I can prove that I'm more popular than you.

Omar Wasow *is the founder and president of New York Online and the Internet Analyst for MSNBC and WNBC.*

Share your thoughts on Six Degrees in the FEED Loop.

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Bacon's

398-A – An Editorial

No Web secrets

IF YOU'VE ever posted a Web page or left a message on a bulletin board on the Internet, those bits of electronic data may still lurk in cyberspace, even if you can't find them. In fact, they may outlive you.

J.D. Lasica, writing in Salon (www.salonmagazine.com) reports databases have been set up by Internet Archives and Deja News to keep copies of everything they can find on the Web. Every few months, Internet Archive's Alexa Internet commercial operation copies all of the Web it can access – more than 300 million Web pages – and stores the data – so far 12 terabytes or 12 trillion bytes of information. They see this as an attempt to preserve the history of the beginning of the information age.

All this data can be accessed – whether or not the person who created it wants it to be. Thus, a Web page you create may live on, even if you no longer maintain it. If a teenager today creates a Web page making fun of a friend, that page may become an issue years later – if he enters politics. Lasica said some high-tech companies may already be using such techniques when checking on job applicants.

In the same article, Indiana University law professor Fred Cate, author of "Privacy in the Information Age," points out laws prohibit government agencies from comparing most kinds of digital information about citizens, but nothing prevents private companies and individuals from doing the same. Cate also points out that workers can use the same technique to find out about their bosses.

THE COMPANIES active in this field hope to preserve a turning point in human history. They also say your descendants will be able to view your Web page and learn about you. On the other hand, you just know these kinds of documents are going to turn up in lawsuits sooner or later.

All Internet users need to be careful about what they create. They should also read the fine print on bulletin boards to learn the policies for archiving.

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The Best of 1998

Netscape Enterprise Server >

Alexa

Have you ever been surfing the Web and wondered where to go next? Alexa Internet is the browser utility of the year because it answers that question--and does a whole lot more. Alexa appears as a small toolbar that works with your Web browser. As you navigate the Web, Alexa helps steer you to where you might want to go next, with a list of "related sites." The list is compiled using user trails, so it does a decent job of guiding you to relevant information.

Alexa also gives you information about the site you're browsing. You can find the site's owner and address, see what other users and third parties like Yahoo! Internet Life think of the site, and check traffic and freshness estimates.



Alexa Internet, San Francisco; 415-561-6900; www.alexa.com

The Best of 1998

Introduction

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DECEMBER 7, 1998

Bacon's

WebSight charts Web traffic

UNIX ChartWorks in November rolled out WebSight 1.0, a Java-based tool for analyzing the logs of Web servers.

WebSight, which the company said runs on Windows NT and Unix, can generate charts illustrating real-time and historical data from Web servers. The software can show the number of hits a site receives, trends for different time periods, the amount of data transmitted and the most popular pages, the company said.

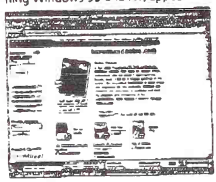
The package costs $295 and works with log files generated by Unix-based Web servers; the company said a future version will add support for servers running on Windows NT.

ChartWorks Inc. of Silver Spring, Md., is at (301) 585-5600; www.chartworks.com.

Alexa search engine revised

Alexa Internet in November released a new version of its Web search engine for Windows.

Alexa 3.0, which works with Microsoft Internet Explorer, Netscape Navigator and Netscape Communicator on machines running Windows 95 and NT, appears within a



user's Web browser to display information about visited sites.

The software sports four panels: The Alexa Snapshot panel provides an overview of site data and links, and the Site Registration panel offers information about a site's registered owner. The Site Stats panel displays ratings of sites' popularity, speed, traffic and the frequency with which site content is updated. The Related Links panel suggests sites similar to that being viewed, according to the company.

Alexa is free and supported by advertising revenue. The company offers an unsupported alpha version of Alexa 1.3 for Mac OS on its Web site, but it has not developed Version 3.0 for Mac OS. Alexa Internet said it is developing a cross-platform version, but the company did not say when that version will arrive.

Alexa Internet of San Francisco is at (415) 561-6800; www.alexa.com.

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Alexa search engine revised.(Alexa Internet's Alexa 3.0 Web search engine for Windows)(Product Announcement)

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Alexa Internet of San Francisco is at (415) 561-6900; www.alexa.com.

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A 'Gift of the Web' for the Library of Congress from Alexa Internet

by Barbara Quint

Alexa Internet (**http://www.alexa.com**), the leading archivist of the World Wide Web, has given the Library of Congress (http://www.loc.gov), one of the world's leading archives from the print age, a gift copy of its recording of the World Wide Web. The donation, comprising 2 terabytes of Web content, is in the form of an interactive digital sculpture. In making the gift, Brewster Kahle, president and CEO, hopes to encourage LC and other research libraries to accept responsibility for preserving the knowledge on the Web as they preserve knowledge in print.

Presented on October 13, the donation represents the first large-scale contribution of digital materials received by the Library of Congress. Digital artist Alan Rath designed the sculpture entitled "World Wide Web 1997. 2 Terabytes in 63 Inches." The gift contains 44 digital tapes alongside four red computer monitors that intermittently flash 10,000 Web pages two every second from the 500,000 sites gathered and stored by Alexa Internet. The archive includes text, images, and audio files representing a full "snapshot" of the Web from early 1997.

The donation fits with the Library of Congress' National Digital Library Program, which makes over 1 million rare American manuscripts, films, sound recordings, and photographs from its collections available free on the Net. Winston Tabb, associate librarian for library services in charge of the Library's collections, welcomed the gift: "Alexa Internet's donation of the Web enhances the Library's holdings and ensures that one of the most significant collections of human thought and expression born of a new medium is preserved in the national collections. Alan Rath's sculpture serves as a tangible icon representing the Web and will help our visitors envision the scope of what has become one of the largest sources of information ever built by humankind."

Alexa's Brewster Kahle has made preserving the Web and its data for posterity his mission: "The fabric of the Web is a temporary one at best unless we commit to its long-term care and feeding. With our donation of the Web archive to the Library of Congress, we're trying to build an infrastructure that transforms the Web into a resource to benefit future generations of scholars and historians."

Alexa Internet estimates that the Web grows at the rate of 1.5 million pages or sites daily. If the present rate of growth continues, the Web will contain more than 1 billion pages by the year 2000. A current snapshot of the Web takes up 3 terabytes (3 million megabytes). Alexa also estimates that the Web doubles in size every 8 months, that approximately 20 million Web content areas exist, and that 100,000 different host machines handle 90 percent of all Web traffic, with 50 percent of all traffic going to 900 top Web sites. However, Alexa's data also reveals that 1 percent of all Web pages are gone after 1 week. Since 1996, Alexa Internet has sent out its robots to "crawl" the public Web every 6 to 8 weeks. It then gathers, stores, and preserves the content in the Internet Archive, a nonprofit organization.

Alexa Internet uses the data in its free Alexa service for generating Site Statistics and Related Links. Other leading Web services tap into its data and technologies including Netscape Communications (the "What's Related" feature in Netscape Communicator 4.5), Encyclopaedia Britannica (Eblast), et al. When downloaded, Alexa appears as a toolbar at the bottom of users' screens and continually communicates with the browser to supply background information on each site searched, including Site Statistics (the owner registrant, popularity, number of sites linking to that site, third-party affiliations with privacy advocates, etc.) and Related Links (a list of 10 related links for each site visited based on usage patterns by all Alexa users). Kahle regards analysis of user behavior in moving from link to link as a tremendous data resource, "a huge, invisible, peer-reviewed process." As Kahle puts it, "You are what you link." If you have an old URL, Alexa Internet might be able to bring it back from an "out-of-print" Web server, but the service cannot search old data specifically. Besides myriad scholarly questions such data might answer, valuable business insights or even legal evidence could come from such an archive.

What to Do with It

Kahle is a true missionary. He named Alexa Internet after the first library of antiquity in Alexandria, Egypt. He takes a virtual view of reality. When we interviewed him, his digital archivist's eye "guess-timated" the Library of Congress' existing print holdings as "about 20 terabytes or $200,000 in storage space. It would take up the space of a couple of Coke machines." Of course, unlike Alexa Internet, which takes everything on pages including video clips, sound, and graphics, Kahle's estimate for digital storage of LC's print collection reflects "only the text, all ASCII. The graphics would get very complicated to estimate."

A Library of Congress representative told us that the Library had accepted the digital donation with two purposes in mind: to preserve the Web content in an archive and to use the collection to experiment with needs and methods for future Web archiving. LC hopes to define what should and what should not go into a digital archive: what to keep and what to discard and to work on how to make archived Web content available to users. Kahle encourages librarians everywhere to start to "grapple with all the political, social, economic, and other issues of documents born digital, not a digitized version of a print library. We're moving toward all digital material. It's never been effectively dealt with before. Problems are everywhere."

When asked about the problems of copyright for the donated Web archive, the LC representative referred to Kahle's theory at Alexa Internet. Alexa limits its archiving to publicly available sections of the Web, and it will remove any material if the copyright holder asks Alexa to do so. However, this approach to copyright seems to put an affirmative duty upon copyright holders to maintain their rights and without notice, as a legal librarian pointed out to us, i.e., Alexa Internet does not notify or alert each and every Web-site administrator of its activities. Kahle admitted that the issue is "murky," but he takes a proactive posture "like the search engines did. AltaVista and the others just went ahead and did it. They didn't ask everyone for permission. The essence of copyright is trying to protect knowledge. There's a role for a library that makes sense in this world. We're proactively going out and building one. We didn't see anyone else trying to do it."

Involving the Library of Congress in the grand mission represents a "really big deal" to Kahle. "This is a watershed. The Web is coming of age. We've gotten the Web as a publishing infrastructure. Now we need to bring more fire power to bear. This is a significant event. It will open doors for other libraries to play meaningful roles. By the Library of Congress doing this, it sets a precedent that the World Wide Web is worth collecting and is a usable tool. We didn't give it to the Smithsonian. We want it in a library oriented for access by researchers, historians, and scholars."





¿Qué sistemas serán afectados?

Probablemente los problemas más graves ocurrirán en las computadoras *mainframe* (grandes, rápidas y que prestan servicio a múltiples usuarios), pero también puede haber dificultades menores en otras plataformas, tales como las máquinas llamadas mini, así como en los ambientes de sistemas Unix y PC.

• • •

Una vez analizado el llamado problema del año 2000 y sus repercusiones en el entorno de la computación, comentaremos acerca de algunos programas que se consideran imprescindibles para el uso eficiente de Internet. Muchas personas me han preguntado qué son los *plug-ins* y los *add-ons* y si ambos términos se refieren al mismo tipo de programas.

He dejado estos dos conceptos sin traducir, pues en ocasiones se han utilizado indistintamente como si significaran lo mismo, aunque, como veremos a continuación, tienen diferencias.

Los *plug-ins* son módulos de programas que mejoran el navegador: le agregan características interactivas, permitiendo ver otro tipo de contenido, algo que los navegadores tradicionales no pueden hacer. Dentro de los *plug-ins* se pueden incluir además a los navegadores fuera de línea. En cambio los *add-ons* son programas que le dan más funcionalidad al navegador, tales como las aplicaciones que ayudan a imprimir páginas Web y a modificar la barra de tareas. Dentro de los *add-ons* están los siguientes:

Alexa

Éste es un programa gratuito que permite clasificar cada página por la que se navega, sin importar si le gustó a usted o no, y le sugiere sitios similares dentro de los más populares de Internet; usted puede pasar a ellos fácilmente. Cuando el navegador indica el siguiente error: "*404 not found*", Alexa también resuelve el problema, proporcionándole al usuario un archivo de los sitios en Internet que no están disponibles para el público. Una característica excelente de este programa es que le da referencias sobre cualquier sitio de Internet, gracias a su integración con la Enciclopedia Británica y con el diccionario Merriam-Webster. Lo puede encontrar en **http://www.alexa.com**.

Browse and Zip

Éste es un programa *shareware* que le permite ver archivos tipo *.zip* en la Red antes de que usted los grabe en su máquina, y bajarlos e instalarlos si así lo desea. Además, le permite reiniciar una transmisión abortada. Como es un programa *shareware*, puede bajar una versión de prueba del sitio **http://www.canyonsw.com** y pagar U.S. $20 si decide conservarlo.

Digi Panel

Éste es un programa asistente muy útil, el cual se coloca en su computadora y guarda todas las direcciones de correo electrónico y de Internet, números ICQ y listas, en forma organizada. Se puede tener acceso a todo lo anterior con sólo dar *clic* en el *mouse*. Este *software* es gratuito y se puede bajar del sitio **http://www.aebulasoft.com**.

Internet Copilot 97

Es un programa diseñado para trabajar en conjunto con su navegador favorito. Combina los 10 *add-ons* más populares en un solo programa. Organiza sus direcciones favoritas del Web, envía y recibe archivos a través de FTP, tiene un directorio de Internet, una máquina de búsqueda, maneja archivos *.zip* y cuenta con muchas otras características. Usted puede bajar una versión para evaluación de este programa del sitio **http://www.logicpulse.com/copilot**.

Kidnet Explorer

Éste es un navegador para niños, el cual permite configurar restricciones y así proporciona una navegación más segura. Para que funcione es necesario tener el Internet Explorer de Microsoft. Se puede bajar una versión *shareware* de **http://members.tripod.com/~escom/kidnetex.htm**.

Web Talk It

Es un programa de reconocimiento de voz diseñado especialmente para los navegadores de Internet; se integra a su explorador favorito. Permite buscar en el Web utilizando comandos de voz, ir hacia abajo en las páginas, a la siguiente, a la anterior o a un sitio determinado. Sin embargo, su inconveniente es que sólo entiende inglés. Lo puede encontrar en **http://www.groverind.com**.

Aunque los *plug-ins* se usan con menos frecuencia debido a que los navegadores son cada día más completos y funcionales, comentaremos acerca de los dos más populares:

QuickTime for Windows

Este *plug-in* permite ver videos QuickTime desde los navegadores Netscape o Internet Explorer: es uno de los más utilizados en Internet. Se puede bajar gratuitamente de **http://quicktime.apple.com/**.

Crescendo

Este *software* permite que cualquiera, equipado con una tarjeta de sonido, escuche música de fondo mientras navega. Es gratuito y lo puede obtener en **http://www.liveupdate.com/crescendo.html**.

El próximo mes continuaremos comentando acerca de las herramientas que todo buen cibernauta debe tener en su biblioteca de *software*.

Preguntas y respuestas:

Soy un asiduo lector de su prestigiada revista. Deseo que por favor me informen acerca del programa "ICQ", de lo que puedo hacer con él y de su funcionamiento. Les quedo muy agradecido.

Atentamente,
Luis Fernando Gutiérrez Vélez
Colombia
fguner@cuansur.uanarino.edu.co
fgutier@lettera.net

Estimado Sr. Gutiérrez:

El ICQ es un programa que busca amigos y asociados que se encuentran conectados a Internet. Por medio de él se puede platicar, enviar mensajes y archivos, jugar o usarlo como una herramienta de negocios en tiempo real. También permite seleccionar la forma de comunicación que se desee. Ésta puede ser escrita, por voz, en conferencias, por transferencia de archivos y juegos de Internet. El ICQ soporta gran variedad de aplicaciones y servidores de la Red, tales como el Microsoft NetMeeting o el Netscape CoolTalk, entre otros. Cuando usted instala el programa se registra en un servidor, el cual le asigna un número universal (UIN, por sus siglas en inglés).

Además, con él es posible ingresar datos de información personal que permiten a otros usuarios del ICQ identificarse entre sí. Una vez que usted sabe quién está en línea, sólo tiene que seleccionar el icono para iniciar la conversación, implementar transferencias de direcciones, mandar mensajes, intercambiar archivos y utilizar aplicaciones adicionales. Este programa lo puede obtener en el sitio FTP: ftp://cotopaxi.dyn.ml.org/icq/icq98a126.exe.

Hola. Le escribo para preguntarle cuál es la función de cada *pin* del microprocesador MMX. Si no tiene la respuesta tal vez me podría recomendar alguna página en Internet que hable de esto. Esperando su ayuda, le envío un cordial saludo.

Jesús Ovando Bilches
job75@hotmail.com

Podrás encontrar toda la información que necesitas en http://www.intel.com.

• • •

Los felicito por su buena revista; la sección que más me gusta es la de computadoras.

Tengo una duda: he escuchado que todas las computadoras fallarán en el año 2000 y ya no servirán, y que el problema todavía no está solucionado. Quiero adquirir un buen equipo de cómputo, pero lo anterior me desanima. ¿Qué me recomiendan? ¿Es verdad o mentira?

Todo el que tenga una opinión acerca de este tema por favor enviarla a: rubenguillermo@correoweb.com.

Rubén Guillermo Ureta Vargas
Veracruz, México

Sr. Rubén:

Es totalmente falso que todas las computadoras vayan a dejar de funcionar. Esto es parcialmente válido para equipos y programas muy viejos. En la actualidad, si usted compra una computadora que tenga un sistema operativo actual como Windows 95 o 98, no tendrá ningún problema.



Le solicitamos información sobre herramientas que estén a la vanguardia para instalar redes de cómputo.

Le agradecemos su ayuda. Es un gran apoyo saber que se cuenta con información confiable y útil para el desarrollo de actividades diversas.

Se despiden de usted sus atentos servidores.

Lic. Jose Enrique Villar Sánchez
Lic. Domingo Acevedo García
Villahermosa, Tabasco
je_training@hotmail.com

Sres. Lics. Villar y Acevedo:

Si se refieren a herramientas de software para redes, les recomiendo el sistema operativo Windows NT Server 4.0, que además de ser relativamente fácil de operar, cuenta con herramientas integradas que lo hacen un sistema operativo de red muy completo.

De cualquier manera, si no tienen experiencia en redes, lo recomendable es que contraten a un experto que les asesore en la instalación del cableado, dispositivos y sistema operativo, ya que aunque su configuración no es muy complicada, se requieren conocimientos básicos de la operación de una red.

En números posteriores iniciaré una serie de artículos donde hablaré sobre cómo establecer una red basada en Windows 95 o 98. Esto podrá ser hecho fácilmente por cualquiera que tenga conocimientos básicos de computación.

• • •

Los felicito por su excelente revista, y a la vez les solicito que me expliquen cómo puedo configurar el Microsoft Outlook Express para abrir una cuenta en Hotmail. Les agradezco su ayuda.

Atentamente,
Natán A. Villarreal G.
Culiacán, Sin.
natan_vg@hotmail.com

Sr. Natán:

Según tengo entendido, sólo se puede tener acceso al servicio de correo electrónico que ofrece Hotmail desde un navegador y a través del Web, lo que significa que no puede utilizar el programa Outlook Express para leer correo de Hotmail.

Estimados amigos:

Tengo un programa del escáner llamado Unlead PhotoImpact 3.01 Edición Especial. El problema ocurre cuando estoy en la Red y decido salvar una imagen. Entonces me la pasa instantáneamente al PhotoImpact ES, que es un BMP, y después no la puedo descargar a mi página Web (sólo se pueden descargar los formatos GIF y JPG). Me han dicho que tal vez pueda haber un programa para pasar de BMP a GIF/JPG. ¿Saben ustedes algo de este programa?

Por otro lado, en el PhotoImpact ES puedo abrir una foto o dibujo y hacerle cambios (de brillo, tamaño, posición, efectos, textura, etc.), pero cada vez que hago uno me lo salva en BMP y no los puedo usar en mi página Web. ¿Qué puedo hacer? Les agradezco su ayuda.

Atentamente,
Aldo Pettengill
Heredia, Costa Rica

Sr. Pettengill:

La solución es muy sencilla. Cuando guarde su imagen sólo elija el formato .JPG o .GIF en la parte que dice "Guardar como archivo de:" del PhotoImpact SE.

• • •

Hola. Tengo un escáner y no he podido hacerlo trabajar bien, porque no sé qué programa debo utilizar, si los que trae el escáner o alguno en particular. Por favor, ¿me podrías recomendar algún programa? Y, ¿cómo podría hacerlo trabajar más rápido?

Rubén Jaramillo
rubgaranton@hotmail.com

Sr. Rubén:

Lo recomendable es que utilice el programa proporcionado por el fabricante del aparato para escanear sus gráficos. Si el software no le convence o no le proporcionaron ninguno, puede utilizar cualquiera, tal como el Adobe Photo Shop.

Estimados lectores:

Si desean que en nuestra sección tratemos algún tema en especial, pueden enviarnos sus sugerencias al domicilio electrónico de **Mecánica Popular** o directamente a la siguiente dirección: roverius@data.net.mx

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Netscape/AOL Talks Rattle Microsoft Trial

Plus: The conspicuous lack of Comdex gaming news, Diamond's heralded Rio player, and some online help for Turkey Day planning.

by Glenn McDonald, special to PC World
November 23, 1998, 5:37 p.m. PT

In a development registering double digits on the Internet Richter scale, AOL is poised to merge with Netscape Communications in a deal that could significantly change the online landscape. Under the terms of the arrangement, America Online would take over Netscape's popular Netcenter portal site as well as distribution of the company's browser software. In a side deal, Sun Microsystems is in line to take control of Netscape's server software, promising easier distribution of its Java products among AOL's 14 million subscribers. The aftershocks of the proposed merger announcement are already being felt in the Microsoft antitrust trial. Both Microsoft and the Justice Department are claiming that the announcement bolsters their case. "This proposed deal demonstrates a simple truth. There is vigorous competition in the marketplace, and Microsoft faces resourceful and creative competitors," said Microsoft senior counsel William Neukom. "In fact, the mere possibility of this kind of a combination completely undermines the government's case from start to finish." That's a well-worn refrain from the defense--but this time Microsoft may be right.

TURKEY DAY is closing in fast, and if you're in need of some last-minute cooking or party-hosting help, look no further. If you have a Web browser and a printer, then you have access to hundreds of recipes and party-planning goodies from a wealth of online Thanksgiving pages. Some of the more ambitious services even offer automated e-mail for dispensing recipes and instructions to guests bringing their own contributions to the table. That's right. The golden promise of Online Menu Synchronization is finally upon us. And for this we give thanks. Get the details in this online exclusive.

FALL COMDEX IS OVER and done with, and sadly for those of us with digital entertainment addictions, there was very little in the way of gaming news out of Las Vegas this year. Probably the most important development was a promise from 3Dfx Interactive that its new Voodoo3 chip set will be available in the second quarter of 1999. The new chip set will include support for a wide range of new 3D protocols; new boards incorporating Voodoo3 technology should sell for around $200. But in game time, that's a long wait. In other news, this columnist is having serious trouble getting out of Act 2 in Westwood's Blade Runner title. Loyal readers with helpful hints, please feel free to send them to e-mail.

DIGESTIBLES

- Alexa Internet announced Monday public availability of Alexa 3.0, the latest release of the company's supplemental online search tool. Alexa integrates directly with Internet Explorer 4.0 and generates on-the-fly information on sites you visit as you surf--such as average viewership, server speed, and even financial information on selected company home pages.

- Diamond Multimedia Systems is shipping its anticipated Rio PMP300 portable digital music player, which supports the controversial MP3 recording format. (Record companies worry that the Rio will encourage piracy of copyrighted music.) The street price is $199.

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The Net

AOL-Netscape and the browser wars

By Paul Festa
Staff Writer, CNET News.com
November 23, 1998, 4:15 p.m. PT

update The possible buyout of Netscape Communications by America Online is threatening to throw a monkey wrench in the machinery of the browser war.

Yet another study has shown Microsoft's Internet Explorer pulling ahead of rival Netscape Communications Navigator. However, the study lumps together Microsoft's product with America Online's branded version of IE. With AOL angling to buy Netscape, the numbers released today could turn out to be one of the last snapshots of the pre-buyout browser battle.

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The statistics, released by market research firm AdKnowledge, show that this month, IE's market share surpassed that of Navigator for the first time. Other research firms have already shown IE pulling ahead, if AOL's branded version is included.

The big question for Microsoft on the browser front is whether AOL, should it buy Netscape, would switch from Internet Explorer to Navigator. While many analysts assume that this would be the case, *Newsweek*, citing "people familiar with the talks," has reported that AOL would keep IE on as the default browser. AOL declined comment.



AOL's deal with Microsoft to use IE runs through mid-2001. But AOL has the option to back out of that agreement as early as January 1, 1999.

Last week, Netscape and AOL were said to be in talks over possibly embedding Navigator into the online giant's service, possibly ending Microsoft's exclusive spot as the sole browser provider for AOL's 14 million users.

According to the AdKnowledge study, users of both IE and AOL-branded IE in November accounted for 49.5 percent of the market, up from 36 percent in January. Navigator users accounted for 45 percent, down from 62 percent in January.

While AOL may have been primarily interested in acquiring Netscape's portal and its users, the Navigator browser is an attractive bonus in the deal, particularly for the direction Netscape has been taking in tying it to Netcenter.

"AOL is very adept at the mechanics of a proprietary client, or one that is tightly integrated with the server," said Forrester Research analyst Eric Brown. "That's increasingly what Navigator and Netcenter are about. AOL liked it, and they're buying it."

But with the recently launched beta of Internet Explorer version 5.0, Microsoft has demonstrated a move in the same direction, albeit with a more site-specific approach. IE 5 provides a frame in which portals and other content providers can stay onscreen while the user surfs the Web.

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Dubbed the "Internet Explorer Web Accessories" initiative, the separate content pane has attracted the participation of Alexa Internet, CNET News.com content partner Bloomberg Financial Markets, the New York Times online edition, and Microsoft's own MSN portal site.

Web Accessories could partially explain a decision by AOL to hold onto IE, though analysts stress that such a scenario is unlikely.

Complicating the browsers' future is Sun Microsystems' involvement in the deal. One possible scenario would have Sun managing the software side of Netscape's business--both the client and the server products--while AOL took over the media wing--i.e., Netcenter.

"A logical structure would have AOL retaining veto power related to the client, but all the software would have one home, and that's with Sun," said Jupiter Communications analyst Adam Schoenfeld. "That's probably what's holding up the deal. Sun is notoriously careful with deals."

Schoenfeld called the deal, should one be approved, a big win for Navigator against IE.

"AOL controls roughly 50 percent of the consumer interactive market," Schoenfeld noted. "That would almost set a floor for Navigator. Sure, some people would change the default, and some would have both, but still, that's a pretty powerful base. That counteracts the Windows advantage."

QUOTE SNAPSHOT

December 11, 1998, 11:12 a.m. PT

Netscape Communications Corp. NSCP

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Sun's interest in the deal is heightened by Navigator's role in implementing Sun's Java programming language. While Netscape abandoned formal efforts to create Javagator, a 100 percent Java client, the leading browsers remain perhaps the most important and widely used Java implementations on the market.

Microsoft recently suffered a legal setback regarding its implementation of Java and subsequently has decided to withdraw some support for the technology in some versions of the browser.

Navigator, however, has had its share of difficulties with Java, and Sun's ownership of the client could be good news for the technology.

"One of the reasons Java crushes the browser so much is that the two companies didn't get their acts together," Schoenfeld said. "Maybe we would have seen the Javagator if Sun were doing it. It was unnatural to have the most visible implementation of Java residing in a different home than the programming language."

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EDS lures Richard Brown from C&W

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Alexa

December 3, 1998

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Have you ever been surfing the Web and wondered where to go next? Alexa Internet is the browser utility of the year because it answers that question--and does a whole lot more. Alexa appears as a small toolbar that works with your Web browser. As you navigate the Web, Alexa helps steer you to where you might want to go next, with a list of "related sites." The list is compiled using user trails, so it does a decent job of guiding you to relevant information.

Alexa also gives you information about the site you're browsing. You can find the site's owner and address, see what other users and third parties like Yahoo! Internet Life think of the site, and check traffic and freshness estimates.

Alexa Internet, San Francisco; 415-561-6900; www.alexa.com (ORS 539).

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Download of the week

Alexa

This is one of the most interesting and useful Internet tools we've ever seen. The premise is simple: as you surf the Web, a toolbar appears on the bottom of your Web browser. This toolbar contains several buttons, each leading to information about the site you're visiting. You can check a site's quality rating (1 to 5), the speed of its connection, how many pages it contains, and the relative "freshness" of its material. You can also find out who owns the domain name for each site you visit, and exactly where the company is located--useful if you like to dash off letters to your favorite sites' owners, but can't ever seem to find their email addresses.

But the highlight of Alexa is its recommended links button. For every site you visit, Alexa will suggest up to ten other sites with similar subject matter. The recommendations are sometimes way off base, but they're far more intelligent than the usual robot-generated responses. For example, a visit to CNN gives you direct links to competing news organizations; a trip to The Dilbert Zone can send you down a pathway to other extremely popular newbie sites like the White House, and a visit to a catalog of porn sites will--rather surprisingly--give you lots of wicked suggestions.

You can grab a beta copy of Alexa today. You need a 486 or better PC running Windows 95 or Windows NT, and Netscape Navigator 2.0 or Internet Explorer 3.0 (or higher). Just click the link below to get started.

Download Alexa

Past downloads

Screensavers
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Alexa

From: Alexa Internet

new pick pop
Version: 3.0
Date: December 4, 1998
File size: 1.7MB
Category: Browsing Companions
Downloads: 86,640
License: Free

Alexa is a **free Internet navigation service** that helps users surf the Web. The service helps users determine the value of Web sites by offering a variety of **stats and facts about each site they visit**, such as who owns the site, how many pages it includes, how frequently it is updated, and so on. If a Web page's server is down, Alexa **has a public archive of cached Web sites to which it can redirect you**, enabling you to **avoid those "not found" messages**. In addition, Alexa users can communicate with each other online in real time through an **instant messaging service**. Alexa also features clickable toolbar access to the Encyclopaedia Britannica and Merriam-Webster's **dictionary and thesaurus** on the Web. This release enables users to **customize their display of the Alexa data** by choosing from four different panels. It also includes additional information such as user reviews and related news, to **help users make business and consumer decisions**. If you're already running an older version of Alexa, shut it down before installing the new one.

Minimum requirements
486, Windows 95/98 with 24MB RAM, or Windows NT 4.0 with 32MB RAM, Internet Explorer 4.0

Related links:
- 50 fabulous freebies
- Internet Explorer (32-bit)

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The Best of 1998

Microsoft Outlook Express >

The Best Internet Software and Sites of 1998

My Favorites Of '98



Don Willmott

Is it true that Internet technology evolves about seven times as fast as any other kind? It sure feels that way. We've seen breakthroughs in the past 12 months that will ultimately change the way we work and shop.

Take Netpodium (www.netpodium.com), a product that helps organizations use the Web to broadcast press conferences or facilitate any kind of information dissemination in an efficient and futuristic way. The broadcaster can send not only sound but also slide shows and presentations that run in sync with the audio. Meanwhile, viewers can type in questions and even participate in instant polls. With prices from $3,995 for 100 users up to $24,995 for 2,000 users, Netpodium may seem expensive, but for certain kinds of gatherings the interactivity it provides is invaluable.

At the other end of the price spectrum is JumpList (www.jumplist.com) from 1/us. The problem: You've built a lot of external links into your great Web site, but you don't have time to keep checking their validity. Enter JumpList. For $30 a year, the service will keep tabs on your links, warning you via e-mail when a link has died.

It was also a good year for Web sites. Two of my personal favorites, ESPN.com (www.espn.com) and The Internet Movie Database (www.imdb.com), were redesigned. Watch for the IMDb's new owner, Amazon.com, to turn it into a huge video store in 1999. The most impressive new site of the year, however, is Microsoft HomeAdvisor (homeadvisor.msn.com). Its interface is unparalleled by any shopping service.

The Best Internet Software and Sites of 1998

- Microsoft Outlook Express
- Netscape Communicator 4.5
- ICQ
- Macromedia Dreamweaver
- Alexa
- Netscape Enterprise Server Standard Edition 3.5.1
- Northern Light
- Excite
- Microsoft Investor
- Amazon.com

Best of Support & Satisfaction

In the past year or so, Microsoft has made up a lot of ground in Internet software with Internet Explorer 4.0 and two messaging clients, Outlook and Outlook Express. But readers still most recommend the competition.

Internet Software

- Netscape Navigator (all versions)
- Eudora (all versions)

Microsoft Outlook Express >

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Alexa

Have you ever been surfing the Web and wondered where to go next? Alexa Internet is the browser utility of the year because it answers that question--and does a whole lot more. Alexa appears as a small toolbar that works with your Web browser. As you navigate the Web, Alexa helps steer you to where you might want to go next, with a list of "related sites." The list is compiled using user trails, so it does a decent job of guiding you to relevant information.

Alexa also gives you information about the site you're browsing. You can find the site's owner and address, see what other users and third parties like Yahoo! Internet Life think of the site, and check traffic and freshness estimates.





Alexa Internet, San Francisco; 415-561-6900; www.alexa.com

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Start-Ups Rev Up For On-Screen Real Estate

November 18, 1998

Internet start-ups are trying to elbow their way into the fight to provide on-screen navigation.

While industry giants such as America Online Inc. and Netscape Communications Corp. hold the inside track in the race to grab on-screen real estate primarily because of their existing customer base, companies like Alexa Internet and Bigfoot International Inc. still see room for themselves in the developing market.

"If you can make yourself useful enough to earn screen real estate," says Alexa Internet President Brewster Kahle, "you've earned people's attention."

About 1 million users have downloaded versions of Alexa's service -- a banner-ad-sized window that displays lists of recommended sites comparable to the one the user is actively reading.

Along with the link lists, Alexa can serve up targeted ads.

Last month alone, Alexa (www. alexa.com) generated 100 million page views.

Netscape has integrated a version of Alexa's service into the 4.5 version of its Communicator software product line in a deal that holds the potential for significantly expanding the reach of Alexa's content.

Bigfoot (www.bigfoot.com), in contrast, is building its push into the on-screen market on the shoulders of Microsoft Corp.'s Internet Explorer browser. Bigfoot has developed a customized version of the Microsoft browser that it calls NeoPlanet.

With NeoPlanet, Bigfoot layers a new on-screen look on top of Microsoft's traditional browser, changing the type of tools and navigation aides available to users on-screen.

The revamped browser, for instance, features a bank of channels offering one-click access to recommended Web links in specific topic categories.

Individual publishers and navigation hubs can insert their own programming into the NeoPlanet browser. Last week, for instance, Network Associates Inc. released a version of the NeoPlanet browser carrying the brand of its McAfee virus protection software.

Network Associates will offer downloads of its NeoPlanet browser later this month, creating the equivalent of an on-screen navigation port focused on computer news and utilities.

"This is a way for them to capitalize on their software distribution channel to have a more sticky relationship with their most active customers," says Drew Cohen, general manager of NeoPlanet (www.neoplanet.com).

But getting loyal customers to download on-screen applications to the desktop is not enough. The challenge is to get people, once there, to use the services and integrate them into their daily routine on the Web.

"It has to be useful," Alexa's Kahle says. "If it's not useful, you're gone."

11/16/98

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Push to Netscape falls flat

By Jim Rapoza

Netscape Communications Corp. wants Internet Explorer users to know what they're missing. Netscape's TuneUp for IE, which makes it easier for IE users to avail themselves of Communicator and Netscape's Netcenter Web site features, actually does little to drive users to Netscape's Web site or browser. However, it does do a good job of demonstrating how third-party vendors can customize IE.

Keyword searching, which lets users type a company name or topic directly into the browser's address bar, is the only really useful feature in TuneUp for IE. IE users can already get an equivalent of the TuneUp's What's Related feature by using the Alexa plug-in for Internet Explorer. Alexa provides most of the What's Related sites for Netscape.

However, although IE 4.01 users who want keyword searching will find little harm in using TuneUp for IE, we recommend that those using the new IE 5.0 beta not download the application because it didn't work properly in our tests.

TuneUp for IE can be found at sitesearch.netscape.com/smartupdate/su_tuneup.html.

Detroit News (Daily)
Nov. 29, 1998

Software gets *sensible*

BY DAVID LYMAN
Free Press Staff Writer

It's becoming easier to use and — surprise! — there are topics out there that might actually interest you

They said computers would make our lives easier, that they would make us smarter and savvier and more aware of the world around us.

So why does it sometimes seem that every piece of software on the store shelves is geared to kids, business geeks or guys who have nothing better to do than play war games?

Perhaps it's just that software for *real* people doesn't scream quite as loud as all those others. At its best, software for real people has to do with real life. It may not be sexy or flashy, but just as those early champions of computers promised us, it does make our lives a little better.

The *really* good news is that software designers have gotten smarter, too. The products they're designing are easier to operate and give us vastly more information than we actually use.

Don't think of this list of software titles as a "Top 10" or even a "best of." It's just a starting point, a list to point you in the right direction and restore your faith that there may be something on the computer store shelves that speaks to you.

Alexa plug-in for Web browsers

PC or Mac
Free, download at www.alexa.com.

Though the Internet is a boon to communication and commerce, one of its greatest



questions about your yard, gradually developing a profile of climate, shade, slope, soil and more. From there, it's simply a matter of finding a style that you like and drawing on the disk's voluminous encyclopedia to find plants that will work for you.

Norman Rockwell: The Man and His Art

PC only
$69.95
Cinegram Media Inc., www.cinegram.com

Poor Norman Rockwell. In much of the art world, he's been relegated to a position bordering on human punch line. His idyllic views of middle America just don't seem to

FROM : ANTENNA GROUP PHONE NO. : 415 896 1094 Dec. 15 1998 11:16AM P2

shortcomings is its anonymity. It's hard to know who's really on the other end of the line. That's a particularly disconcerting thought just as you're about to type in your credit card number.

Alexa is a small program that helps you bridge the chasm of the unknown a bit. You add it to your Web browser, and when you visit a Web site, Alexa's computer will offer up a modest profile of who is operating the site: address and telephone number; the length of time the site has been registered and some information about how large the site is. For corporate sites, it may even offer links to information on investments, number of employees and profitability.

Alexa is not foolproof. The street address you find may be only where the computer is located. But some information is better than none, and Alexa is already offering a beta version that promises more.

Complete MasterCook Suite 4.0

PC or Mac
$49.95.
Includes Graham Kerr's Swiftly Seasoned Cooking Light and MasterCook Deluxe.
www.sierra.com.

No, this recipe file and cooking guide will not force you to have your desktop computer sitting on the kitchen counter. But this three-disk set from Sierra On-Line will be an invaluable kitchen resource.

Sure, there are scads of recipes: light meals, family favorites, a bartender's guide and even a smattering of international dishes (though it's hard to understand why the recipe for the wonderfully sweet baklava calls for 36 cloves of garlic). But those are already available in abundance from books.

This product shines in tasks that computers do best: computing, comparing, instructing. Type in the ingredients of a dish you're preparing, and this program will give you a complete nutritional analysis. Or if a recipe calls for 2 cups of egg whites, type that into the equivalents page and the program will tell you how many eggs that is likely to be.

The MasterCook Suite has several other organizational and educational aspects that are noteworthy. It allows you to do a cost analysis and develop a wine list. It offers a primer on seasoning and has dozens of how-to video clips from basting and making a roux to seeding chile peppers.

[illegible] too many people forget that he was champooning integration on the cover of the Saturday Evening Post long before most of America was ready for the idea.

Norman Rockwell: The Man and His Art may be a bit too laudatory for those who are skeptical of Rockwell's poignant views of the world. But it steadfastly avoids being wholly worshipful as it wends its way through his life — complete with hundreds of images — in a handsomely designed package that is as wry as it is informative.

RedShift 3

PC or Mac.
$49.95.
Maris/Piranha Interactive.
www.redshift3.com.

RedShift 3 is software for stargazers, people who know a summer sky from a winter one and who can rattle off the names of major asteroids.

Because computer programs are not limited by the laws of physics, this program can scurry you backward or forward through time and space. Want to see what the sky looked like on the day of the Emancipation Proclamation? Type in the date and the location, and RedShift will recreate it. Want to see what that sky looked like from the vantage point of some distant star? Same thing. Better-than-ever animation also permits dazzling time-elapse displays, like watching the progress of Halley's Comet or seeing the changes in the course of an entire year in the sky over Detroit.

Cosmopolitan Virtual Makeover or Essence Virtual Makeover

PC or Mac.
$49.99 each.
www.virtualmakeover.com.

Yes, there's something a little silly about this software. At worst, it's the computer equivalent of playing with dolls. Pick one of the models offered — blessedly, they look like real people, not super-skinny supermodels — and give her a new look. Change her hairstyle, lipstick color, eyebrow thickness and on and on and on.

But both of these products — which are packed with commercial pitches — offer many different and fairly simple ways to insert your own picture and try on different systems operating with Windows 95 and NT 4.0) is also laden with things that can make your life easier. If you depend heavily on specialized calculators, for instance, the skimpy thing that comes loaded with Windows just doesn't cut it. Gizmos offers options, from scientific calculators to programmable ones. It also has a shredder, which completely erases unwanted documents from your computer's hard drive.

In many regards, it's a dazzling program, the product of programmers who strived to make Windows 95 into the product they always wanted. Be aware, though, it's memory hungry, taking anywhere from 200 to 320 megabytes of hard disk space.

BodyWorks 6.0

PC only.
$44.95.
www.teamingpro.com.

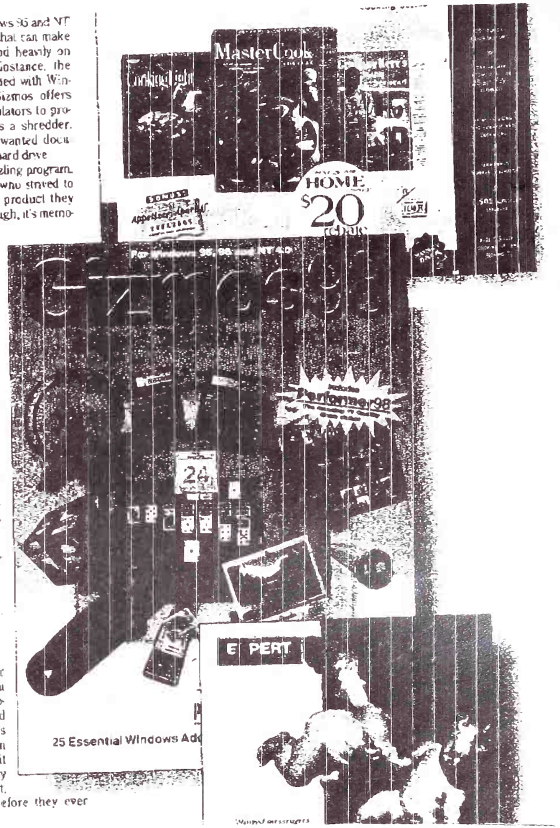
Think of this as a 3-D tour through the human body with a reference book attached. Not long ago, undertakings like this one were iffy, with animation that lumbered between jerky and erratic.

But thanks to the ever-greater horsepower of home machines, BodyWorks brings users a highly detailed excursion into the recesses of the body.

Pop Away plug-in for Web browsers

PC or Mac.
Free for 30 days, $10 afterward.
Downloadable at
www.triserv.com.

If you're a regular cruiser of the World Wide Web, you have surely come across pop-up screens, the second and sometimes third windows that suddenly show up on your screen when you visit various Web sites. Pop Away can put an end to all of that, closing pop-up screens before they ever appear.



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DECEMBER 15, 1998



Bacon's

Web Donated To Library Of Congress

WASHINGTON, DC—Alexa Internet, provider of the free Web navigation service Alexa, recently donated a copy of the public World Wide Web to the Library of Congress.

The donation comprises 2 terabytes of Web content, which will become part of the collections of the Library and preserved for future generations.

According to Alexa Internet, the size of the Web will reach 1 billion pages by the year 2000.

The Library of Congress is the world's largest library, with more than 113 million items in its collections, which cover nearly all fields of knowledge in all formats. Founded in 1800, the Library will celebrate its bicentennial in 2000.

The Library's website (http://www.loc.gov) is a major contributor of intellectual content to the Internet and handles more than 60 million transactions per month.

Alexa Internet was founded in 1996 by Brewster Kahle and Bruce Gilliat and provides the free Alexa Web navigation service at http://www.alexa.com. The company donates a copy of the Web on an ongoing basis to the nonprofit Internet Archive, which is endowed to preserve digital heritage for scholarly access.

Complete LandDesigner

PC or Mac.
$49.95.
Includes Garden Encyclopedia, 3D Deck, 3D Landscape and Photo LandDesigner.
www.sierra.com.

Like most of Sierra On-Line's Home series, the Complete LandDesigner is detailed, extremely easy to use and works exactly the way it's supposed to.

The greatest strength of this two-disk landscape planning set is that you can start out knowing almost nothing about landscaping and still have a reasonable chance at succeeding. Unless you tell it otherwise, it presumes you know nothing.

The process begins with an interview in which the program asks you dozens of

looks.

At times, it's technically clumsy, like trying to outline lips with a mouse so that you can pick a color of lip liner. But at others, it's a remarkably sensitive program, applying blush and eyeliner in the most subtle ways.

Gizmos98

PC only.
$49.95.
www.pkry.com.

Many elements of this program are just fun. Like being able to have a screen saver that resembles a 1970s disco floor or having a calendar that looks like the one hanging in the garage or choosing from several different clocks to appear on your screen.

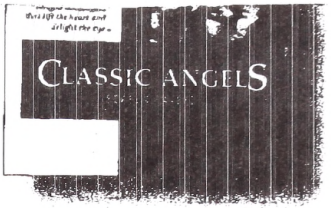
But Gizmos98 (which also works on

Classic Angels Screen Savers

PC only.
$14.99.
superbsoftware.com.

There are many flashier screen savers out there. But these 24 angel images, lifted from paintings by the Masters, are lavish and classy and, for some, even inspirational. Besides, we can all use a little help in doing battle with the demons that seem to creep into our hard drives from time to time.

Staff writer David Lyman can be reached by E-mail at dlyman@freepress.com, at 1-313-222-6823.



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DECEMBER 15, 1998

Bacon's

Authors' Copyright Claims Upheld by Court: Ryan vs. CARL Corporation

by Barbara Quint

The latest round of a potentially high impact case in the ongoing saga of copyright has gone in favor of authors as copyright holders. On October 13, Judge Fern M. Smith of the United States District Court for the Northern District of California issued an order granting summary adjudication in favor of the plaintiffs in Joan Ryan et al. v. CARL Corporation et al. (C97-3873). The class action suit contended that CARL Corporation, a subsidiary of the Dialog Corporation (Knight-Ridder Information at the time of the initial complaint), violated authors' copyrights when they made copyright payments to publishers instead of authors for material where the author held the copyright. If the ruling holds through the appellate process, the decision could not only endanger service from commercial document delivery houses, but also interlibrary loan and perhaps full-text online delivery as well, according to some observers. OCLC, for example, just announced their 85th million ILL transaction.

The initial complaint filed on October 22, 1997 [http://www.jmls.edu/cyber/cases/carl1.html], opened a class action complaint for copyright infringement by five freelance authors against CARL. The complaint — Joan Ryan, Jim Tuinney, Arlie Russell Hochschild, Lyn Hejinian, and Ronald Sillman vs. CARL Corporation and its subsidiary, the UnCover Company, and Knight-Ridder Information, Inc. — seeks "damages, injunctive relief, and restitution. Specifically, Plaintiffs seek compensatory and statutory damages,... [and] an injunction from this Court that bars the Defendants from continuing to offer for sale, to copy, and to sell Plaintiffs' copyrighted works without permission or authorization..." All the authors had done freelance work for publishers, but registered copyright for their individual works. Most of the work cited consists of excerpts from books re-published in magazines. The authors contend that CARL "knew or reasonably should have known, that the magazines and journal publishers did not have the right or authorization to grant Defendants the right to copy and sell the contributing authors' works through its delivery services." The plaintiffs want the defendants "preliminarily and permanently enjoined from offering for sale, copying, or selling any copyrighted works in connection with the Defendants' database and article delivery services known as UnCover, UnCover Express, or any other similar services owned or operated by Defendants, without the express written permission or authorization of the copyright owners in and to each and every copyrighted work."

One point of interest: The complaint did not cite Knight-Ridder Corporation, the deep-pockets parent of Knight-Ridder Information Inc., at the time of filing. We confirmed with the house counsel for the Dialog Corporation that the new company has assumed the role of Knight-Ridder Information Inc. as a named defendant in the case. Apparently liabilities go along with assets in the acquisition process.

Another point of interest, even though the case now goes into the law books as Ryan or Joan Ryan v. CARL Corporation, on June 15, 1998, the Court granted defendants' motion to dismiss plaintiff Joan Ryan on the ground that she did not possess the grant of copyright at the time of filing, a status which the Copyright Act requires for filing suit.

The Judge's Decision

Judge Smith considered the legal dispute in this case to turn on the meaning of the words "as part" in Section 201(C) of the Copyright Act: "Unless the parties have contracted otherwise, 'the owner of copyright in the collective work is presumed to have acquired only the privilege of reproducing and distributing the contribution as part of that particular collective work, any revision of that collective work, and any later collective work in the same series.' 17 U.S.C. 201(c)." In determining the meaning of the statutory language, Judge Smith found that "although rational arguments can be made for each interpretation, plaintiffs' reading of the statute better accounts for what appears to be the intent.... Both the language and the legislative history of section 201(c) suggest that when in doubt, courts should construe the rights of publishers narrowly rather than broadly in relation to those of authors. The statute expressly states that the holder of the copyright in the collective work is presumed 'only' the enumerated rights."

In defense of this portion of the decision, Judge Smith cited the recent Tasini v. New York Times Co. case [http://www.jmls.edu/cyber/cases/tasini1.html], which authors lost to publishers pending appeal. In general, however, the court found Tasini "instructive but not determinative." In Tasini, authors sought compensation for the inclusion in electronic databases of their contributions to collected works. The court, relying on the "revision" privilege of Section 201(c), determined that the publishers had the right to include the entire collected works in the databases without obtaining permission from or compensating the authors. In finding that the conversion to an electronic format was a permissible revision, the court emphasized that the publishers' selection of the articles remained, even if particular arrangement and formatting was lost.... No reasonable argument can be made that defendants in this case are 'revising' their collected works when they photocopy individual articles. It is true that the layout, images, and any other arrangement value added by the publishers is retained. Calling the reproduction of a single article a 'revision' of a collected work, however, is more strained than even a flexible interpretation can withstand."

The Court recognized the trouble this decision could cause. "From the standpoint of societal efficiency, it makes more

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sense to allocate the right of reproduction to publishers, because publishers are easier to locate. Defendants are correct that academic use of articles will be made more difficult by the adoption of plaintiffs' construction, which will require obtaining permission from both the publisher and the author." Trouble or not, the "Court, however, is not free to construe statutes in the manner most efficient. Instead, it must follow the intent of Congress as expressed in the terms of the statute. In this case, that compels adoption of plaintiffs' construction of section 201(c)."

The Court agreed that after CARL/UnCover heard about the filing of this lawsuit, they "immediately attempted to block plaintiffs' articles from further delivery." Nevertheless, by disregarding warnings that the article was blocked, the plaintiffs succeeded in getting copies out of CARL a few days after the filing, a month later, and even five months later.

The Court found that the plaintiffs had standing and supported the class action claim: "Given that UnCover delivers 1,000 articles a day and pays no royalties to authors, many putative class members will have standing."

The Court agreed with CARL Corporation that it needed more time to conduct further discovery to support their second affirmative defense, contending that the authors may have granted authority to the publishers with whom CARL dealt. "Further discovery would be needed to determine whether plaintiffs had transferred licenses to publishers, who then lawfully transferred them to defendants."

What Does It Mean?

If upheld, this case would seem to mean that document delivery operations could not rely on permissions from publishers to transfer rights; they would have to ask both publishers and authors. CARL's UnCover database covers over 17,000 journals from thousands of publishers, but the task of acquiring permissions from that range of concerns pales before the task of pursuing individual authors for the over eight million articles in the database, with 5,000 more pouring in each day.

We interviewed Ward Shaw, chairman and CEO of the CARL Corporation, about the effect of the case. He considered it a very difficult ruling, to put it mildly. In a rather plaintive aside, Shaw wondered why authors should choose to pick on CARL as a target, one of the few document delivery services that has made a public effort to pay authors through the National Writers Union author registry. Daniel Reidy, one of the attorneys for the plaintiffs, regarded this move as merely an attempt by CARL to ward off bad publicity.

Shaw recognized that most publishers do not make a general practice of getting specific or explicit transfer of rights from authors. "The net effect of the ruling would be to substantially limit the control of publishers on collected works. It makes it nearly impossible for companies like UnCover to do business, but it also applies to publishers putting things on Web sites. Interlibrary Loan would be another big problem, though they have relied on fair use before permission. In any case, an indemnity from the Copyright Clearance Center would not be worth much after this ruling, unless they have the authors on their side."

Shaw predicted that the authors might regret the effect of such a decision in time: "Most people see this as a great thing for authors, but in fact it means publishers would campaign particularly hard for a negotiation of transfer for all rights before they'll publish, with subsidiary rights becoming more important. This could particularly affect scholarly publishing where there are always more articles than outlets. This would not be a good thing for authors, if it ended up making it harder for them to control anything."

Looking further down the road, we asked Shaw whether the outcome from such a ruling might prove favorable in time if it moved authors, particularly scholarly ones, to connect directly to their readers using the Web — and hopefully at more reasonable prices than scholarly publishers now charge. Shaw agreed such a development might have its advantages, but "only if we could build an ASCAP [American Society for Composers and Publishers] or BMI clearinghouse type structure for handling author payments." However, Shaw reminded us that the National Writers Union's registry has not proved very successful so far, at least in terms of growth.

In any case, Shaw faces a real dilemma, if this ruling holds. "UnCover deals with 6,000 publishers, but probably six million authors. And what about multiple authorships? I can see it now. One article with seven or eight authors, which is common in scholarly publications, and we'd have to get permissions from all of them plus the publishers. Give me a break. Two would be dead, three retired and living in Bimini, and the last one can't stand the other five any more. Probably all of them had a falling out with the publisher who has since merged with another company or gone out of business."

One of the plaintiffs' attorneys, Daniel Reidy, painted a less dire picture. With certification as a class — and a decision in their favor by the federal judiciary — Reidy hopes that resolution of the case would lead to the establishment of a fund from CARL/UnCover where writers could file claims for payment. Reidy sees the case as defending the rights of the true creators in a changing publishing market: "As electronic markets develop, though they're still in their infancy, freelance authors have become aware of this market, aware of the additional value beyond initial publication. Basically, freelance authors should not be left holding an empty bag. If publishers want additional revenue from additional outlets, then authors should have to grant the rights or get extra pay. What we're doing is protecting rights."

What's Next?

Over the next few months, the plaintiffs will seek certification as a class action, according to Reidy. Though the judge spoke favorably of their status as a class in the current decision, the process will involve a series of motions. They will also continue with the discovery process. Apparently a somewhat peripheral conflict has emerged in the case concerning

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CARL's practices in storing articles they scan initially onto optical disks for quicker distribution to future orders. According to Reidy, CARL's management told the court and the plaintiffs that they only followed this practice with full publisher permission. Later investigations revealed that CARL stored most if not all the articles they scanned on disks, with or without permission, though the head of CARL claimed ignorance of this practice.

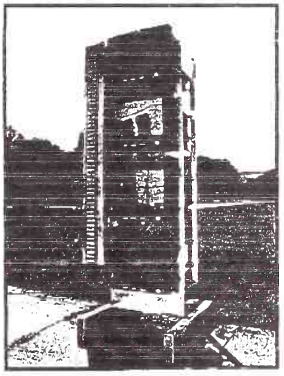
As one would expect of an ardent advocate, Reidy tends to portray CARL as larger and more dangerous than most information industry analysts would. For example, he suspects that CARL's parent, Dialog, is planning to integrate CARL document delivery, specifically their optical disk "anthology" of articles, into new products. Since Dialog has never managed to integrate the full text it carried online with matching citations or abstracts in the other files it carried, such radical advances in product design would seem rather unlikely.

In any case, CARL will continue to fight the matter. According to Shaw, they plan to appeal this ruling to the Ninth Circuit for certification and expect the matter to come to trial in late 1999. (Meanwhile, the Tasini case continues through the appellate process in the Second Circuit.) CARL and its parent, Dialog, have deeper pockets for this kind of lengthy litigation. Reidy told us that the plaintiffs' attorneys have taken the case on contingency and receive no financial support from the National Writers Union, for one. However, they are dedicated to an aggressive representation for their clients, according to Reidy.

The plaintiffs appear to have strong legal representation. When we spoke with John Shuff from Robins, Kaplan, Miller & Ciresi and asked him about the durability of their commitment to the contingency-funded case, he pointed to the traditions of his firm. This firm represented the defendants in the Bhopal gas leak case as well as the Minnesota case which became the first tobacco case to go to trial.

[Our thanks for linkable cites to full-text background materials in this article go to John Marshall Law School's Center for Information Technology and Privacy Law (http://www.jmls.edu/cyber).]

A "Gift of the Web" for The Library of Congress from Alexa Internet



by Barbara Quint

Alexa Internet, the leading archivist of the World Wide Web, has given the Library of Congress, one of the world's leading archives from the print age, a gift copy of their recording of the World Wide Web. The donation, comprising two terabytes of Web content, is in the form of an interactive digital sculpture. In making the gift, Brewster Kahle, president and CEO, hopes to encourage LC and other research libraries to accept responsibility for preserving the knowledge on the Web as they have done for knowledge in print.

Presented on October 13, the donation represents the first large-scale contribution of digital materials received by the Library of Congress. Digital artist Alan Rath designed the sculpture, entitled "World Wide Web 1997: 2 Terabytes in 63 Inches." The gift contains 44 digital tapes alongside four red computer monitors that intermittently flash 10,000 Web pages — two every second — from the 500,000 sites gathered and stored by Alexa Internet. The archive includes text, images, and audio files representing a full "snapshot" of the Web from early 1997.

The donation fits with the Library of Congress' National Digital Library Program, which makes over 1 million rare American manuscripts, films, sound recordings, and photographs from the Library's collections available free on the Net. Winston Tabb, Associate Librarian for Library Services in charge of the Library's collections, welcomed the gift, "Alexa Internet's donation of the Web enhances the Library's holdings and ensures that one of the most significant collections of human thought and expression born of a new medium is preserved in the national collections. Alan Rath's sculpture serves as a tangible icon representing the Web and will help our visitors envision the scope of what has become one of the largest sources of information ever built by humankind."

Brewster Kahle has made preserving the Web and its data for posterity his mission, "The fabric of the Web is a temporary one at best unless we commit to its long-term care and feeding. With our donation of the Web Archive to the Library of Congress, we're trying to build an infrastructure that transforms the Web into a resource to benefit future generations of scholars and historians."

Alexa Internet estimates that the Web grows at the rate of 1.5 million pages or sites daily. If the present rate of growth continues, the Web will contain more than one billion pages by the year 2000.

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A current snapshot of the Web takes up three terabytes (three million megabytes). It is also estimated that the Web doubles in size every eight months, that approximately 20 million Web content areas exist, and that 100,000 different host machines handle 90 percent of all Web traffic, with 50 percent of all traffic going to 900 top Web sites. However, Alexa's data also reveals that 1 percent of all Web pages are gone after one week. Since 1996, Alexa Internet has sent out its robots to "crawl" the public Web every six to eight weeks. It then gathers, stores, and preserves the content Web in the Internet Archive, a non-profit organization.

Alexa uses the data in its free Alexa service for generating Site Statistics and Related Links. Other leading Web services tap into Alexa data and technologies, including Netscape Communications (the "What's Related" feature in Netscape Communicator 4.5), Encyclopaedia Britannica (Eblast), et al. When downloaded, Alexa appears as a toolbar at the bottom of users' screens and continually communicates with the browser to supply background information on each site searched, including Site Statistics (the owner registrant, popularity, number of sites linking to that site, third-party affiliations with privacy advocates, etc.) and Related Links (a list of 10 related links for each site visited based on usage patterns by all Alexa users). Kahle regards analysis of user behavior in moving from link to link as a tremendous data resource, "a huge, invisible, peer-review process." As Kahle puts it, "You are what you link." If you have an old URL, Alexa Internet might be able to bring it back from an "out-of-print" Web server, but they cannot search old data specifically. Besides myriad scholarly questions such data might answer, valuable business insights or even legal evidence could come from such an archive.

What to Do with It

Kahle is a true missionary. He named Alexa Internet after the first library of antiquity in Alexandria, Egypt. He takes a virtual view of reality. When we interviewed him, his digital archivist's eye guess-timated the Library of Congress' existing print holdings as "about 20 terabytes or $200,000 in storage space. It would take up the space of a couple of Coke machines." Of course, unlike Alexa Internet, which takes everything on pages including video clips, sound, and graphics, Kahle's estimate for digital storage of LC's print collection reflects "only the text, all ASCII. The graphics would get very complicated to estimate."

A Library of Congress representative told us the LC had accepted the digital donation with two purposes in mind — to preserve the Web content in archive and to use the collection to experiment with needs and methods for future Web archiving. LC hopes to define what should and what should not go into a digital archive, what to keep and what to discard, and to work on how to make archived Web content available to users. Kahle encourages librarians everywhere to start to "grapple with all the political, social, economic and other issue of documents born digital, not a digitized version of a print library. We're moving toward all digital material. It's never been effectively dealt with before. Problems are everywhere."

When asked about the problems of copyright for the donated Web archive, the LC representative referred to Kahle's theory at Alexa Internet. Alexa limits its archiving to publicly available sections of the Web. Alexa will remove any material if the copyright holder asks them to. However, this approach to copyright seems to put an affirmative duty upon the copyright holder to maintain their rights — and without notice, as a legal librarian pointed out to us, i.e., Alexa Internet does not notify or alert each and every Web site of its activities. Kahle admitted that the issue is "murky," but he takes a proactive posture "like the search engines did. AltaVista and the others just went ahead and did it. They didn't ask everyone for permission. The essence of copyright is trying to protect knowledge. There's a role for a library that makes sense in this world. We're proactively going out and building one. We didn't see anyone else trying to do it."

Involving the Library of Congress in the grand mission represents a "really big deal" to Kahle. "This is a watershed. The Web is coming of age. We've gotten the Web as a publishing infrastructure. Now we need to bring more fire power to bear. This is a significant event. It will open doors for other libraries to play meaningful roles. By the Library of Congress doing this, it sets a precedent that the World Wide Web is worth collecting and as a usable tool. We didn't give it to the Smithsonian. We want it in a library oriented for access by researchers, historians, and scholars."

Ovid Technologies Bought by Wolters Kluwer for $200 Million

by Barbara Quint

Ovid Technologies Inc., a medium-sized, robust traditional search service, has sold a majority stake of its outstanding shares to Wolters Kluwer USA. Ovid will remain a stand-alone company, maintaining existing management, within the Wolters Kluwer International Healthcare Division and will continue to partner with other information providers in medical scientific markets. The new ownership should expand the content access for Ovid as well as enhance their resources, but it does not plan to confine Ovid's software to internal use by Wolters Kluwer.

Ovid provides a full range of database services to primarily medical and scientific markets. It offers the Ovid search software and bundles the technology with full-text journals and bibliographic databases. The Ovid software has particular

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strength in linking between and within documents, allowing users to jump from citations to full-text, for example. The company offers multiple platforms for its 90 databases — pay-per-use or subscription access to a dial-up service also available on the Web, licensed tapes with or without software, CD-ROMs, support for networks and client/server structures, etc. Its market includes over 30,000 licensed users from over 5,000 institutions around the world, including private and public universities, library consortia, pharmaceutical firms, and government agencies.

Wolters Kluwer, a multinational publishing company with some 15,000 employees active in 26 countries, plans to apply Ovid's technology to the electronic publication of over 900 journals from their medical/scientific publishing companies, making them fully searchable and navigable and linking them to both bibliographic databases and to journals of other publishers already in the Ovid system. Besides medical and scientific publishing such as Adis International's pharmaceutical publications, Wolters Kluwer USA also operates legal and tax publishing (CCH is one subsidiary), business publishing, and educational/professional training publications.

Wolters Kluwer paid $24.59 per share for public shares in Ovid Technologies, a publicly traded company on NASDAQ (OVID). The total acquisition price was approximately $200 million in cash. Ovid's annual sales in 1997, reported pro forma, amounted to $37.4 million with sales reported for the first half of 1998 at $21.8 million. The company has almost 200 full-time employees with offices in Salt Lake City, Utah, London, England, and Sydney, Australia. The main office is on 7th Avenue in New York City.

Mark Nelson, president, founder, and chief executive officer of Ovid, and several other major shareholders currently own some 5.1 million shares of Ovid or 63 percent of the outstanding shares on a fully diluted basis. Nelson personally owns around 50 percent of the company he founded in 1988 as Online Research Systems, followed by a name change to CD Plus before adopting the name of its Ovid software as the company name. In 1994, Ovid acquired BRS Online. At this point, Ovid has completely "Webbed" their offerings. In fact, Web access represents "the fastest growing part of the business," according to Nelson.

Nelson told us that he considers the acquisition "strategically, a great fit. In our marketplace — academic and STM content — Wolters Kluwer makes a nice match. It will give us lots of leverage we never had before to do what we want done." Nelson commented that Wolters Kluwer runs its subsidiary companies very autonomously. In fact, Wolters Kluwer USA has only six people at the top. They expect companies to run themselves without a lot of politics, according to Nelson who still considers Ovid his "baby."

Nelson sees the value Ovid offers Wolters Kluwer as divided into two areas — Ovid's ability to continue to compete in their core markets, and their push into the area of clinical information products. "We know what users want. We're close to the user side of the supply chain." Wolters Kluwer does not just look upon Ovid as a distribution channel, according to Nelson. "We bring more value added than distribution. We've told them that we're very close to the user. We know what they do. We know what they need. This knowledge should be valuable to a publisher of information. We're more likely to collaborate with them and other publishers of print and electronic journals. Our perspective is to let users' needs drive development and the value added." Nelson clearly wanted Ovid's new ownership to open up opportunities to reach new content, without threatening or shutting down any current relationships with other publishers. He plans on maintaining a policy for "keeping a level playing field on what we offer." Users' needs and wants should define what Ovid offers.

Nelson told us that Wolters Kluwer is "committed to keeping current management in place. They see us as a great company." He expects no downsizing ("If anything, we may be upsizing.")

Fulltext Sources Online Directory Bought by Information Today, Inc.

by Barbara Quint

BiblioData, Inc. has sold its leading directory, *Fulltext Sources Online* (FSO), to Information Today, Inc. ITI has taken over existing inventory and production of future editions. Since its initial publication in 1988, *Fulltext Sources Online* has grown from a few hundred listings to over 8,500 entries covering newspapers, journals, magazines, newsletters, and newswires found online in full text. The semi-annual publication covers full text on the following vendors: Dialog, LEXIS-NEXIS, Westlaw, Dow Jones, IAC InSite/InSite Pro, Ovid, STN International, GBI, Genios, FT Profile, DataStar, InfoGlobe, Infomart, QL, Reuters Business Briefing, and Burrelle's. Last year, it began adding entries for publisher Web sites that offer free Internet archives for journals.

Ruth Orenstein, president of BiblioData and now former editor of *FSO*, recalled the early days: "Our first book was 129 pages, with no coverage dates but lots of white space. The current book has 626 pages, including Internet URLs, a concept unknown to early searchers." Single issues of *FSO* cost $118, and 1-year subscriptions (two issues) run $195 (standing orders are $175.50).

According to Tom Hogan, president of Information Today, Inc., *FSO* has instantly become one of ITI's flagship

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products: "BiblioData has done a magnificent job of providing an indispensable guide for information professionals. We hope to continue this excellent tradition, while updating and refining *FSO* for the future." Orenstein said, "We are pleased that Information Today will be carrying on the task of updating FSO for the next millennium.... We will be working closely with Information Today to help them complete the transition as smoothly as possible." Donald T. Hawkins has been named managing editor, and ITI plans to appoint another editor shortly. Hawkins also edits *Information Science Abstracts*, a recent ITI acquisition from Documentation Abstracts, Inc.

Orenstein and BiblioData have set a high standard for ITI to meet. For 10 years, every issue of *Fulltext Sources Online* has appeared with an announcement of substantial improvements and expansion. Even with over 8,000 listings, almost half the listings are still varified with online searches, rather than relying on the lists vendors provide. ITI will also take over the "Private Zone" BiblioData has offered, which allows subscribers to check on the latest Web sites for journals online.

Like many of the best reference tools, *Fulltext Sources Online* began as a tool designed for the designer. Orenstein left a career doing online searching in market research to start an information brokerage. "I started making the list for myself in 1989. When I was finished, it looked like a book. So I signed up for a tabletop exhibit at the Online World conference that year, but it ended up they had no tabletops available. So they gave me an empty booth. All I had was just a draft of my book, but it went fabulously right from the start." Colleagues and advisers gave her very good comments, according to Orenstein. "Any time someone told me something that rang true, I put it in the next book."

BiblioData has kept the publishing rights to the newsletter it inaugurated in 1995, *The Cyberskeptic's Guide to Internet Research*. The decision to sell *FSO* now was almost a function of time, according to Orenstein. "The 10th anniversary issue was in July. Creating the book was eating up more and more of my time. After 10 years, I thought people might want something different. It seemed like the right time. I enjoy starting new products and that's what I hope to do now. I welcome ideas from others."

LEXIS-NEXIS Announces a Universe to Access on the Web

by Paula J. Hane

LEXIS-NEXIS has had several separate Web products available for a few years, but the company has just announced LEXIS-NEXIS Universe, which provides the first fully integrated, customizable Web-based access to the vast LEXIS-NEXIS data warehouse. Designed for business professionals, and particularly for the enterprise-wide corporate market, the product joins the Universe product lines previously rolled out for different markets: Academic Universe, Congressional Universe, and Statistical Universe.

LEXIS-NEXIS Universe has actually been quietly marketed since August, but was officially announced in a press release on October 19. Getting away from the use of proprietary search software, the new service is accessed with a Web browser (Internet Explorer 3.01 or above, Netscape 3.01 or above, or browsers supporting HTML 3.0 or above). Calling it a "productivity tool" rather than an online search service, the company emphasizes that the product is integrated and customizable so it can be tailored to meet the needs of an individual's work flow, tasks, or functions.

LEXIS-NEXIS Universe can be customized for different professionals' needs within a corporation by selecting from a large variety of content "bundles." By slicing the nearly 25,000 sources of the LEXIS-NEXIS services into unique packages, this Web product can meet the daily information requirements of corporate functions such as strategic planning, marketing, sales, public relations, information technology, and business development.

The opening screen provides a choice of Top News (from CNN and other sources), Personal News, Industry News, and Search, each one being customizable for each individual in an organization while also including flexible update schedules and e-mail delivery options. The Search option screen provides search buttons according to the content bundles chosen: News, Company, People, Government, Companies, Medical, Legal, and Public Record. These offer forms-based searching. There is also an Advanced Search button that allows Boolean searching.

LEXIS-NEXIS learned from its customers' experiences with previous Web products and has incorporated key features such as FOCUS, More Like This, and Trackers that proved popular. FOCUS provides a simple way to narrow a search without starting over and wasting time. More Like This, first introduced on the LEXIS-NEXIS online service in 1995, uses an on-point article to serve as the basis for a new search, allowing the user to ask for more information of a similar nature. Personal News serves as an individual's customized clipping service.

Coleman Hutchins, information center manager at the public relations firm Fleishman Hillard, says that putting Universe on the desktop of account executives and senior staff would allow everyone in the company to have access to thousands of global information sources at the click of a mouse. "Universe is so user friendly that we gave it to an intern to do research with no instruction and he had no problem at all," Hutchins says. "Yet the depth and breadth of information is unmatched. Putting this power on desktops through the firm would free information specialists like me from rou-

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line searching and allow us to perform the analysis and data crunching that is a real added value to our clients."

LEXIS-NEXIS Universe is an enterprise-wide product, aimed primarily at corporate users, with flat-rate pricing based on the number of users, and with the price decreasing as the number of users increases. The smallest content bundle available includes a 90-day news archive and costs $50 per user, per month. A mid-range choice of content bundles for one to 10 users would be about $250 per user, per month. Transactional pricing options are also available. For example, a small business or information broker may choose to get certain News and Company bundles at a flat rate and search other content transactionally. The company has also advertised an option to search in the Major Papers file for $9 a day, charged to a credit card.

Christine Wunderlin, manager of the Lands End library, wanted a predictable, flat rate that she could easily budget for, without concern about renegotiation with the vendor every few months. "With the contract I negotiated for LEXIS-NEXIS Universe, I don't have to worry anymore. We're not being charged to look at articles or to print them, as with their competitor's product that Lands End used previously," she said. A flat fee was important to Wunderlin because she charges back to the departments that use the product, an impossible feat with per document charges and continually escalating subscription rates, she says.

Though it was not mentioned in its news release on the product, LEXIS-NEXIS intends to add the capability to search the Internet for information. A company representative said that Internet searching should be available early next year, and searching in corporate Intranets by mid-year '99. A user will be able to do one search, but the results from each source will be put in their own folders. So after a search, you'd see a folder that says "LEXIS-NEXIS," another that says "Web," and another that is labeled "Intranet."

So, LEXIS-NEXIS is clearly in the ranks of traditional services retooling their products for Web access (with special emphasis on that very important customization capability) and bracing themselves for the onslaught of Web-based competitors, hoping their superior content and search capabilities hold up under the pricing pressures. LEXIS-NEXIS was not out the door first, but the company promised that it has listened to what customers want.

[Watch for upcoming reviews of Lexis-Nexis Universe, from both the end-user and professional searcher viewpoints, in upcoming issues of *Searcher* Magazine's "Web Wise Ways" columns.]



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Bacon's

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Upgrade

Shortly after the release of the latest operating system for Apple's Macintosh computer, **Mac OS 8.5**, some users began to report something very disturbing. In the process of being installed on their computers, the operating system trashed their hard drives.

Although it was a rare occurrence, that's obviously the very last thing you want to have happen when you are installing a hard drive. At first Apple said it was having a hard time duplicating the problem, then discovered the cause. According to Apple's Web site: "Previous versions of Drive Setup can overwrite small portions of the Mac OS Standard format partition if the partitions on the target drive are not as expected. This is an extremely rare occurrence, but could cause drive repair utilities to report that block 0 of that volume is bad or cause the drive not to show up on the desktop."

Apple has released a patch for the operating system that brings it up to version 8.5.1. It fixes this problem

as well as a memory leak and problems with its much-touted Web-search feature, Sherlock.

You can get the patch for free at til.info.apple.com/techinfo.nsf/artnum/n26165. Or you can call 800-293-6617 and order it on CD for $9.95.

➤ When Microsoft was ordered by a federal court either to change its version of Java so it met creator Sun Microsystems' standard for the programming language or remove it altogether from the **Windows** operating system, Microsoft chose to fix it. Now you can get a copy of the technologically correct version at www.microsoft.com/windows/ie/download/jvm.htm.

➤ A patch that corrects several Year 2000 issues in **Windows 98** is now available through the Windows Update feature of that operating system. . . . ATI Technologies has released beta test drivers that support OpenGL and DirectX 6.0 for **Rage Pro Turbo** video cards . . . New drivers for audio cards with chipsets from **Aureal Semiconductor (A3D)** are available at www.a3d.com/html/download/drivers/ . . . Version 3.0 of **Alexa**, an Internet search tool, is available at www.alexa.com . . . Version 6.0.2 of the Macintosh drivers for **Iomega** drives are at ftp.iomega.com/pub/english/macio-10a.hqx.

Editor's note: Applying patches and updates to software can be risky. Be sure you carefully read information about the patch before downloading it from a Web site. Back up the data used by a software program before applying a patch. And when updating the operating system, back up your entire system first.

BugNet

➤ **Microsoft** — If you have enabled IRQ Steering in Windows 95 OSR2, you may have problems when you try to remove a PCI multimedia device from Device Manager. Microsoft says that you may be prompted to install the new hardware device, even if you have not physically installed one in the computer. If you click on Refresh in Device Manager, the old device may reappear, with a yellow exclamation mark. Microsoft says they have fixed this in Windows 98.

Squash more bugs with BugNet at www.bugnet.com.

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Bacon's

Pockets of the past litter the Internet

By Patti Hartigan
GLOBE STAFF

Steve Baldwin didn't set out to be an on-line ghost-buster: It just sort of happened.

His story begins on a summer night in 1996, July Fourth, to be exact. He was drifting in Long Island Sound on a pleasure craft that belonged to his ex-wife's parents. (Yes, she was his ex-wife at the time – apparently, he got along with the ex-in-laws.) Anyway, the captain and crew had fallen asleep, leaving Baldwin at the steering wheel.

Cyber Links

Now, Baldwin is a webmaster, not a shipmaster: In other words, he didn't have a clue. "I had this sense of peril, and all of a sudden, I started thinking about the Internet," he recalls. "I was working at Pathfinder [Time Warner's erstwhile pioneer-

tually a lot of work to maintain them," DeVries says. "You end up with all these little islands in cyberspace that no one has any interest in."

Baldwin stalks those islands to get a good laugh, but he's also a strong proponent of a serious project to archive the Internet – phantoms and all – for historical purposes. Founded in San Francisco by a pioneer named Brewster Kahle, the Internet Archive (www.archive.org) aims to preserve the ever-changing world of cyberspace, and it has already documented sites from the 1996 presidential election in an archive housed at the Smithsonian Institution.

As for Ghost Sites, it's had a rather spotty life itself since the idea was spawned that fateful night at sea. Baldwin let it fossilize for about six months last year, but now it's up and running

What happens to

erstwhile pioneering Web site) at the time, and I suddenly realized that everything we were creating is immortal. It all crystallized for me. Web sites are like ghost ships, like the Flying Dutchman. Unless you keep a crew on board, they'll drift like haunted phantoms in the night."

What happens to sites once the novelty wears off? The answer is: nothing. They drift aimlessly. And they can be annoying obstacles.

Metaphorical musings aside, Baldwin had a slightly more pressing problem in the real world. He was steering straight for a jetty.

As the story goes, the captain woke up just in time to put the ship back on course. Baldwin got off the boat, retired his deck shoes, and set up Ghost Sites, a site that offers a whimsical chronicle of abandoned Web sites gathering cobwebs in cyberspace. It is a sort of on-line mausoleum, with witty commentary about sites that continue to broadcast the "latest" news from, say, two or three years ago. Baldwin seeks out mothballed pages and rates them up and running again at a cool zine called Disobey.com. "It's an almost unpardonable sin," Baldwin concedes about the period when he let Ghost Sites become, well, a ghost site. He's no longer working at Pathfinder, one of the first publishing experiments on the Web that has lost its early promise. Baldwin is freelancing these days. His primary gig? He's a ghost writer for Time Digital.

• • •

Vic Polk, meet Joan Blades.

The Boston lawyer has never actually met the Berkeley, Calif., entrepreneur, but since September, they've been computer compadres working tenaciously toward a mutual goal. Blades and her partner, Wes Boyd, started moveon.org, an on-line "flash campaign" urging Congress to censure President Clinton and get the whole thing over with, once and for all. Polk, a partner at Bingham

with a little ghost system (three ghosts for a site that is "dead, but well-preserved"; five for a site that is "stuffed, embalmed and ready for Internet museum.")

A few examples: The "official" site hawking Woodstock '94, featuring pages counting down to the day of the event; posted in the infancy of the Web, they are quaint displays of simple text and images that give you the same feeling you get when reading an essay you wrote in grade school. There's also a site commemorating the death of Jerry Garcia, offering the "latest" photos of tie-dyed mourners. One site connects you to breaking news on the Blizzard of '96; another celebrates the 100th running of the Boston Marathon – too bad it happened two years ago.

This is amusing stuff for on-line archeologists, but these specters represent a deeper problem. What happens to a site once the novelty wears off and the creator just lets it slide (or forgets the password required to update the content)? The answer is: nothing. Such sites drift aimlessly. And they can be annoying obstacles for folks who use the Internet for research, slowing users down when ghost sites haunt search results.

By nature, the Internet is decentralized, without an official archivist or librarian. That's part of its chaotic beauty – and a source of its frustration. "This isn't the Dewey Decimal System; it's a very imprecise way of finding information," Baldwin says. The best way to avoid surfing ghost sites – albeit an imperfect solution – is to use the advanced options available on some search engines.

One search engine has even made dead sites part of its national advertising campaign: The television spots for Hotbot.com feature a bunch of old cronies offering investment tips: "I've got a hot one," a gray-haired suit advises. "Asbestos. It's a new miracle fiber." You get the point.

Andrew DeVries, director of marketing and communications for Wired Digital, Hotbot's parent company, says the ads aim to stress the fact that the search engine updates its database every three to four weeks to weed out "dead links" that lead users to a "Document Not Found" message. It doesn't do anything about the ghosts, though. "Those sites show you the triteness from the beginning of the Web, when everybody went out and created a site and then realized it's actually a lot of work," he says.

Dana & Gould, joined the effort after he received an e-mail from a friend, and he is one of scores of volunteers all over the country. "It's high-tech political activism at a low cost," Polk says.

The grass-roots organization gathered more than 300,000 signatures against impeachment, which, by all accounts, is the biggest on-line petition in history. At press time, it didn't appear that moveon.org made any difference, but its effort represents a gigantic stride in on-line political organization. Minnesota governor-elect Jesse Ventura proved that even a professional wrestler can muscle his way into office by mobilizing his forces on the Internet. And moveon.org was a valiant attempt to empower regular citizens.

"We started this Web site for $89.50, and we had our socks knocked off by the response," Blades says. She's not too thrilled about the likely outcome of this one-issue project, but she predicts that on-line activism is about to blossom. "It's about consensus building," Blades says. "The Internet is a place where people can become active in politics." Win or lose, moveon.org has taken a step forward.

• • •

This week, Disney opened a preview of its new portal, Go Network. (The preview is at www.beta.go.com.) It sports a few nifty features, including "follow-me-tabs" that enable you to adapt content as you move through the site, without having to backtrack. It also has a built-in content filter for parents (this is Disney, folks). Other than that, it looks a lot like Yahoo, except that it's driven by Disney-created content, including ESPN, ABC News, and Mickey and friends. The Kids page, of course, takes you "behind the screens at 'A Bug's Life' " and links you to "More Fun at Disney.com."

• • •

Ah, that's entertainment. But does the Internet really need its own Academy Award-style ceremony? The folks behind the Webby Awards seem to think so. The third annual ceremony is slated for March in San Francisco, and the celebration promises to be a glittery gathering of the digerati. The nominees will be announced Jan. 6. By the way, all of last year's winners are still going strong; no ghosts in this group.

▶ *Send e-mail to cyberlinks@globe.com.*

PA - 0230 DAILY NEWSPAPER
ERIE DAILY TIMES
Erie, PA

Circ - (E) 35,032 (S) 95,045

DECEMBER 18, 1998

Bacon's

3 of 5 - A

Video game updates on the Internet

By JEFF HOUCK
Tribune Media Services

Here are some Internet sites you will find useful and entertaining, including a way to look for new video games and find telephone area codes on your computer.

INTERNET ARCHIVE
http://www.archive.org/

Be afraid. Be very afraid. Or at least be careful what you choose to write online. The Internet Archive is collecting and storing such public materials from the Internet as contributions to the World Wide Web, Netnews, and downloadable software. The Archive aims to provide historians, researchers, scholars and others access to this vast collection of data (reaching 10 terabytes). How this info will ultimately be used is unknown but there's no denying the archive will become a useful research tool.

NONPROFIT ISSUES
http://www.nonprofitissues.com/

A newsletter written for executives of nonprofit organizations and their advisers, this site offers coverage of legal issues that affect those agencies. Visitors can order a free copy of the site's main guide, access past editions of the site's reference pages and sign up for an e-mail update and monthly e-mail report about changes to the site.

WEBCRAWLER SEARCH VOYEUR
http://webcrawler.com/SearchTicker.html

Some things serve no purpose yet are highly useful. Too Zen-ish for you? One gander at this site, essentially a scrolling ticker that shows some of the thousands of terms requested on the America Online Webcrawler search engine, and you'll have a front-row look at what your fellow Web users are fishing for. If you're quick enough to click on a passing word, the engine will take you to the results of that search. A word of warning: Not all the terms are prim and proper.

INTELLECTUAL PROPERTY WORLD ONLINE
http://206.169.98.71/IPW/

Intellectual property – what a concept. As if it was a batch of mental real estate. This site clears up the confusion about trademark, copyright and patent infringement with an abundance of news, commentary on court cases and articles from leading practitioners. The site tends to focus on issues in the United Kingdom's courts but includes issues pending around the world.

TELEPHONE AREA CODE FINDER
http://www.mmi.world.com/telephone.htm

It's amazing how people insist on using the Web for simple tasks they could still accomplish without electronics. This site, for example, supplies phone area code and time zone information for North America. The rationale: "In North America, new area codes are being changed and added monthly to meet the demand for pagers, faxes, modems, and cellular phones." True, but it's not that complex to hunt down with a little ol' thing they call the phone book.

USDA' AGRICULTURE FACT BOOK 1998
http://www.usda.gov/news/pubs/fbook98/content.htm

Need to know how many tons of turnips American farmers produced last year? How about head of cattle? Bushels of corn? Maybe you'd like to know how much milk we drank in the U.S. this year. Give this site a look. It explores the changing structure of U.S. agriculture, rural development, and specifically looks at what Americans eat. (Alas, we couldn't find definitive data on pork rind consumption.)

ALLDOMAINS.COM: ADVANCED SEARCH
http://www.alldomains.com/adv-search/index.html

Time's a-wasting. All your competitors have set up shop online and you're still doodling around trying to figure out a name. This search engine can cut to the chase for you by searching for Web domain names or company names. If a match turns up, the name is taken. For registries with searchable databases, ownership information for the domain name will also be given.

PDA BUZZ
http://www.pdabuzz.com/Discussion/cgi-bin/Ultimate.cgi

PDA? Wasn't that what you used to get busted for in the hallways in high school (Personal Displays of Affection)? Alas, today the acronym stands for the less amorous Personal Digital Assistant -- or palmtop computer. And darn if people aren't giddy over their possibilities. Enthusiasts and curiosity seekers can see what PDA owners think of their brands, trade operation secrets, and otherwise crow about their investment in microcomputing.

VIDEOGAMES.COM
http://www.videogames.com/

Hey, did you hear that Turok 2: Seeds of Evil is due out soon? Oh and that Carmageddon 2, the sequel to the original automotive gorefest, is also headed for the stores? We we didn't either, because we hadn traipsed through Videogames.co in a long time. The flashy but we organized site offers news, review previews and codes for breakir games by Sony, Nintendo and Sega

THE ANSWERINGMACHINE
http://www.answering machine.co.uk/main.htm

Whether you have a stand-alon answering machine or use you computer to take calls, this site ha plenty of outgoing message option to keep callers guessing. Movi clips, humorous snippets from co medians, even serious messages - they're all here.

OSOPINION.COM
http://www.osopinion.com/

The war between makers of computer operating systems (Microsoft, Apple, et. al.) has as much drama these days as "Gone With the Wind" – court fights, advertising blitzes, powerful new products battling it out in the marketplace. The stuff of great novels, we say. This site keeps tabs on some of the latest developments, offers lots of links to interesting related sites, and allows visitors to submit columns and reviews.

PRO FARMER ONLINE
http://www.profarmer.com/

The eye here is cast toward worldwide developments in agricultural news and how they affect farm production in the United States. The site also features a USDA reports calendar, links to other ag sites and some interactive forums with agricultural specialists. Some areas require membership, but there's plenty of free stuff, too.

NM-D120 DAILY NEWSPAPER
LAS CRUCES SUN-NEWS
Las Cruces, NM
Circ-(M) 22,785 (S) 23,677
DECEMBER 25, 1998
Bacon's

Internet haunted by ghosts of forgotten Web sites

By Patti Hartigan
The Boston Globe

Steve Baldwin didn't set out to be an on-line ghost-buster: It just sort of happened.

His story begins on a summer night in 1996, July Fourth, to be exact. He was drifting in Long Island Sound on a pleasure craft. The captain and crew had fallen asleep, leaving Baldwin at the steering wheel. Now, Baldwin is a webmaster, not a shipmaster: In other words, he didn't have a clue. "I had this sense of peril, and all of a sudden, I started thinking about the Internet," he recalls. "I was working at Pathfinder (Time Warner's erstwhile pioneering Web site) at the time, and I suddenly realized that everything we were creating is immortal. It all crystallized for me: Web sites are like ghost ships, like the Flying Dutchman. Unless you keep a crew on board, they'll drift like haunted phantoms in the night."

Baldwin got off the boat, retired his deck shoes, and set up Ghost Sites, a site that offers a whimsical chronicle of abandoned Web sites gathering cobwebs in cyberspace. It is a sort of on-line mausoleum, with witty commentary about sites that continue to broadcast the "latest" news from, say, two or three years ago. Baldwin seeks out mothballed pages and rates them with a little ghost system (three ghosts for a site that is "dead, but well-preserved"; five for a site that is "stuffed, embalmed and ready for Internet museum.")

A few examples: The "official" site hawking Woodstock '94, featuring pages counting down to the day of the event; posted in the infancy of the Web, they are quaint displays of simple text and images that give you the same feeling you get when reading an essay you wrote in grade school. There's also a site connected to a "Document Not Found" message. It doesn't do anything about the ghosts, though. "Those sites show you the triteness from the beginning of the Web, when everybody went out and created a site and then realized it's actually a lot of work to maintain them," DeVries says. "You end up with all these little islands in cyberspace that no one has any interest in."

Baldwin stalks those islands to get a good laugh, but he's also a strong proponent of a serious project to archive the Internet — phantoms and all — for historical purposes. Founded in San Francisco by a pioneer named Brewster Kahle, the Internet Archive (www.archive.org) aims to preserve the ever-changing world of cyberspace, and it has already documented sites from the 1996 presidential election in an archive housed at the Smithsonian Institution.

As for Ghost Sites, it's had a rather spotty life itself since the idea was spawned that fateful night at sea. Baldwin let it fossilize for about six months last year, but now it's up and running again at a cool zine called Disobey.com.

"It's an almost unpardonable sin," Baldwin concedes about the period when he let Ghost Sites become, well, a ghost site. He's no longer working at Pathfinder, one of the first publishing experiments on the Web that has lost its early promise. Baldwin is freelancing these days. His primary gig? He's a ghost writer for Time Digital.

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This is amusing stuff for online archeologists, but these specters represent a deeper problem. What happens to a site once the novelty wears off and the creator just lets it slide (or forgets the password required to update the content)? The answer is: nothing. Such sites drift aimlessly. And they can be annoying obstacles for folks who use the Internet for research, slowing users down when ghost sites haunt search results.

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FROM : ANTENNA GROUP PHONE NO. : 415 896 1994 Jan. 21 1999 11:21AM P2

VT – D80 DAILY NEWSPAPER
RUTLAND HERALD
Rutland, VT

Circ – (M) 21,827 (S) 23,562

DECEMBER 28, 1998

Bacon's

3985-A

Everybody can use 'MySpace,' man!

By Bill Dubie
And Dave Sciuto

Talk about using every last pixel of screen real estate. MySpace is a task-control bar that sits in the overscan area (i.e., the little black stripe) at the bottom of your screen, providing "cartridges" of information that you access with your browser. If your video card doesn't support the overscan area, MySpace will situate itself below your taskbar.

The beauty of MySpace is that information on frequently viewed sites is always at hand; the program comes configured with cartridges such as Finance (stock market, NASDAQ, News, Desktop Ticker), Entertainment (primarily Disney sites), MySpace online (Great Sites, Search, Chat, etc.), as well as desktop utility cartridges and spaces you can configure. Each cartridge contains several levels, so don't be misled by the initial presentation of selections.



MySpace can also be set up as a rotating bar in your screen saver. Tickers for InfoSpace and the stock market can scroll across your screen vista, while you busily work or surf, undisturbed by the bar.

Though the competition for the bottom lines of the screen can be crowded with Alexa, PointCast, and your own Windows taskbar (which you can relocate), MySpace deserves a look-see, especially where space is at a premium.

Price: Free

Where to find it: http://www.thepixelcompany.com/myspace/product/index.html. System requirements: A PC running Windows 95 or 98 and an Internet connection; VGA monitor, 3MB of free disk space; 20MB RAM (Win95), 24MB RAM (Win98).

Bill Dubie and Dave Sciuto co-host "The Computer Report" on WCAP AM-980 in Lowell, Mass., on Sundays at 7 am. Hear the show on RealAudio through their web site http://TheReport.com. Contact them at billdave@mv.net.

JAN


JAN.

WINDOWS MAGAZINE
Jericho, NY

Circ – 887,746
Monthly

JANUARY 1999

Resources

Here you'll find our top 200 shareware and freeware programs, Web sites for Windows tips and our technical support hotline. Visit *http://www.winmag.com/software* to download all the software. For additional, Web-based information on a vendor in the hotline, visit *http://www.winmag.com/winfo* and enter the company's Winfo number.

Shareware & Freeware

BUSINESS

FF Billing Manager PRO 2.0 Manage customer accounts, invoices, billing and products. $60.95. M & M Technologies. FFBMPR.ZIP 713KB

Spy Personal Diary 6.5 Record thoughts, keep a to-do list, search files, and password-protect all. $24.95. CAM Development. MP032.ZIP 935KB

Quick Business Inventory Control 1.0 Perform all inventory tasks from ordering through checking out. Limit 200. Ryltech Software. SBICI3DEX.EXE 3.4MB

StockAgent Pro Track your favorite stocks and find out when they rise or fall past a certain price. $24.95. Insanely Great Software. STOCKAGENT.EXE 507KB

Visual Business Cards 3.1 Design and print business cards using a simple interface. Backgrounds and screen images are included. $19.98. RKS Software. VBCX.EXE 1.4MB

Visual Day Planner 6.01 Use this network-aware calendar to organize your schedule. $29.95. inKline Global. 2DAY601.ZIP 3.6MB

COMMUNICATIONS

Any Speed 1.3 Trick the data-transfer speed between your system and another or between your HD, ROM, and hard drive—and graph the results in a chart. $27.20. PY Software. ANYSP011.ZIP 650KB

AOL Instant Messenger 2.0 Beta Instantly communicate with friends on AOL or the Internet. Free. America Online. AIM95.EXE 1.5MB

AutoDUN 1.5 Enhance Dial-Up Networking and control all of your connections. Automatically dials your programs. $16 [illegible]. ADUNASE.ZIP 1.8MB

AutoPreview95 5.0 Automatically preview file downloads, e-mail, netnews, and Internet posts. $29.95. David Smith. AWP95V54.EXE 1.7MB

Dial-Up Magic 1.6 Export and recreate RAS settings on other computers. $10. TechMagic, LLC. DUNMAG16.EXE 1MB

Dial-Up Networking Monitor 2.0 Graph DUN statistics such as throughput and bytes received. Free. John Graham. DUNMON.ZIP 150KB

Dipstick 2.52 Ping servers to determine the fastest sites. Free. Klever Group. DIPSTICK.ZIP 671KB

DU Meter 2.1 Chart the performance of your networks or dial-up connection. $10. Helm Gerhardsen. DUMTR210.EXE 337KB

Orange 2.52 Report your ISP in the event of a bad connection. Free. Vector Development. DUNO2252.ZIP 222KB

FTP Voyager 6.0 A multifeatured client interface, filters, file search and folder shortcuts highlight this FTP app. $37.95. Deerhaven Communications Co.. FTPVSETUP.EXE 2MB

FW Classic FTP This FTP client resumes downloads if you get disconnected. $10. ARC Ltd.. FWCLASSICFTP.EXE 2MB

MTUSpeed Pro 4.10 Adjust Registry MTU settings to get the most out of your surfing experience. $10. Mike Sutherland. MTUSPEED410.EXE 360KB

Net LightWave 2.5 Optimize your system's NetBt, RWIN and TTL Internet connection settings. Free. Knight Developing. NETLIGHT20.ZIP 1.9MB

Net Medic 1.2 Identify Internet problems and tap ISP performance. $49.95. WebMaster Software. NM.EXE 1MB

NetMeeting 2.1 Integrate multi-user chat sessions, whiteboards, application sharing and video chat into your business. Free. Microsoft Corp.. NM21.EXE 2.2MB

Pager 2.3 Stop missing calls while you're online—Pager delivers voice messages directly to your Desktop. $29.95. Pager Communications. PAG0023.EXE 441KB

PowerAIM 1.2 Organize your Buddy List and Instant Messages in AOL's Instant Messenger. $14.95. BPS Software. BPS_PAID.EXE 1.9MB

PrintExp Server 3.1 Send Internet faxes and pages via Web-based forms. $295. ProseNet. PROTOFAXV31.EXE 2.4MB

RAS-e 95 Specify alternate phone numbers in the event of a busy signal with this powerful alternative to Dial-Up Networking. $29.95. Lamb Software. SETUPRAS.EXE 997KB

TweakDUN 2.10 Optimize Internet throughput with this free registry editor. $25.50. Philip Tang & Sons Pte Ltd. TUNEDUN210.ZIP 664KB

Weather Stream 1.2 Get updated weather forecasts for cities you specify. Free. Robert Mare. WXSTATIONS_2.ZIP 270KB

WS_FTP LE 4.60 This lite FTP client doesn't have all the features of its shareware cousin, but it's still one of our favorites. Free. Ipswitch. WS_FTPLE.EXE 662KB

WS_FTP Pro 5.0 Use an Explorer-style interface with drag-and-drop capabilities to transfer files. $37.50. Ipswitch. WSFTPPRO.ZIP 1.3MB

E-MAIL

Calypso 2.4 Perform simultaneous full-text searches and message filters/previews for multiple mail accounts. $39.95. Micro Computer Systems. CALYPSO.EXE 3.5MB

Chilton Preview 1.02 Preview messages in a child pane in Microsoft Outlook 97 with this add-on. $5. Bill Chilton. CHILTONP.ZIP 26.1KB

DTS Mail 32 2.5 This powerful e-mail app offers a spell checker, headless message filtering, and multiple server support. $20. DTS. DTMAIL.EXE 7MB

Eudora Light 3.0.5 This "light" e-mail app is a winner—even without some of its big brother's features. Free. Qualcomm. EUL305.EXE 4.6MB

Eudora Pro Email 4.0 This powerful client includes message previewing, PGP encryption, HTML mail and a variety of plug-ins. $39. Qualcomm. EP4020EM0.EXE 3.3MB

PC Mail Send messages to multiple recipients without using long cc: lists. Great for mailing lists. $24.95. Prosoft Apps. PCMAIL20.ZIP 1.3MB

Sonicblast 1.0 Send voice messages over e-mail using RealAudio. Free. Sonic Mail. SONIC4.EXE 2.9MB

TransSoft Mail Control 4.0 Maintain your server and remotely dial into your PC to access mail. $49. TransSoft. TMCAB.PE.EXE 4.1MB

FILE MANAGEMENT

DiskScan 3 Compress large files across multiple floppy disks. Free. Dustin Friesenhahn. DSJHDVB.ZIP 462KB

Drag and File Gold 4.17 Manage files using side-by-side listings, horizontal and vertical window tiling, sorting options and display filters. $55. Canyon Software. DRGOLD.EXE 2.1MB

File Stinger 3.0 Keep critical data safe using this full-featured file backup app. $15. John C. Pratt. STAGER2.ZIP 1MB

MagicDisk98 Add AutoPlay functionality and more to a floppy disk. Free. Jan Germer. MAGICDISK.ZIP 1MB

PowerDesk Utilities 98 Tons of file-management features—including an 80-format file viewer and a hard-disk cleanup utility—for the power user. $149.95. Inforite Corp.. PDU98EVAL.EXE 5MB

PowerZip 4.02 Create, uncompress and test ZIP files from a window or pop-up menu. Free. Dimitri Temkovski. PTZIP40.EXE 1.1MB

2,001 Tips/Resources

Quick View Plus 4.5 Preview different file types, from Word to HTML to GIF. $49. Inso Corp., 0450E32E.EXE 4.5MB

Turbo Browser 98 6.1 View directory trees, folder contents and individual documents from a single, triple-display window. $59.95. Pacific Gold Coast Corp., TB98ENT1.EXE 1.5MB

WAssociate 2.4 Change file associations fast. Free. Wilbert Hengst, WASSOCIATE.ZIP 230KB

What Is This? Get and save detailed information about files from a Context menu. $20. Jimjams, WIT039.ZIP 518KB

GRAPHICS/MULTIMEDIA

Animagic GIF Animator 1.08 Quickly create animated GIFs. $29. Right to Left Software, ANIMG106.ZIP 526KB

ButtonWiz 2.0.0 Generate and save buttons for your Web page. Just specify a style, text color and a caption. $15. Joel Ryan Software, BUTTON.ZIP 2MB

CD-Quick Cache 3.10 Store CD-ROM data to RAM or your hard disk for lightning-fast access. $29. Circuit Systems, CDQ32.ZIP 523KB

DiscPlay 4 Contact an Internet database for album information about your music CDs. $17.25. Obvion Systems, DISCP404.EXE 1.6MB

EZ View 98 Pro 6.0 View most graphics file types, and play CDs and multimedia files—including WAV and AVI. $12.95. BB Shareware, EZS50.EXE 1.9MB

GIF Movie Gear 2.6 GIF animation-maker with tons of tools for the detail-oriented author. $30. Gamani Productions, GMVGR26.EXE 659KB

IconTOY 2 Scan your hard drive for all your icons. $15. Arkadiy Istomin, ICONTOY2.ZIP 261KB

IrfanView32 2.85 View and convert most image formats, and display images in a slide show. Free. Irfan Skiljan, IVIEW285.ZIP 320KB

IQ : 17 Alter streamed Internet audio on the fly to produce the illusion of surround sound. $24.95. QSound Labs, IQ17EVAL.EXE 1.9MB

Notify CD Player 1.51.3 Get Internet information about your favorite CDs with this audio player. Free. Mats Ljunggvist, NTFYCD.ZIP 122KB

Paint Shop Pro 5.01 with Animation Shop 1 Top-notch image editor with graphic-animation support, CMYK color separation and layering options. $99. Jasc Software, PSPS01EV.EXE 7.3MB

Photo Viewer 4.0 View and convert more than 30 bitmapped image formats. Frco Ulbas Systems, PIVWR40.EXE 2MB

QuickExplorer 1.0 View text, image, audio and video files in the same window with a few clicks. $11. Shanky Software, QE10.EXE 758KB

RealPlayer Play live and pre-recorded audio over the Internet with this Web browser plug-in. Free. RealNetworks, R32_G2B1_2.EXE 2.4MB

Reptile 1.4 Create textured or gradient backgrounds for Web pages. Free. Sausage Software, REPTILEINSTALL.EXE 1.7MB

Winamp 1.92-SP1 Customizable music player with support for several music formats, includes a drag-and-drop play list. $10. Nullsoft, WA192SP1.EXE 602KB

HTML AUTHORING

Agile HTML Editor 1.10 This source editor supports syntax coloring and knows which browsers and standards support which tags. $75. Compware. AGHE120.ZIP 2MB

Arachnophilia 3.6 Keyboard macros & site analyzer code beautifier and an FTP update tool in one package. Free. Paul Lutus, ARACH_FULL.ZIP 1.8MB

Browserola 1.01 Generate multiple versions of a file and remove the tags each browser doesn't recognize. $49. Codo Development, BROLA101.EXE 1MB

BrowserSizer 1.02 Open IE or Navigator and resize the window to simulate different screen resolutions. Free. Racecar, BSZR102.ZIP 916KB

Cheap Date 4.0.7 Create a daily, monthly or even hourly calendar in HTML. $19.95. GWWWiz, CHEAPDATE.ZIP 876KB

CoffeeCup StyleSheet Maker ++ 3.0 Edit and preview cascading style sheets using an intuitive interface. $30. CoffeeCup Software, COFFEESTYLE30.ZIP 2MB

CoolCat 4.01 This development suite includes an HTML editor, site manager and page optimizer. $99.95. Anawave Software, CAT401.EXE 7.9MB

Frontier 5.1 Use this scriptable, cross-platform management system to render your Web site in any given style. From $99. UserLand Software, TRIAL513A.ZIP 1.6MB

HoTMetaL Pro 4.0 Choose your environment (WYSIWYG, WYSIWYG with HTML, HTML only) with this Web-authoring app. $99. SoftQuad, HM4EV.EXE 20MB

HTML2EXE Compile your entire site into an executable file with a built-in browser. $99. UCS, H2EV2D.ZIP 815KB

Hyperlnclude Automate common-code insertion across your pages. Free. Fazoware. HINC10.ZIP 1.8MB

LinkBot Sniff out broken links, slow pages and HTML errors. $249.95. Tetranet Software. LINKBOT.EXE 3.2MB

ScriptActive Convert pages with ActiveX controls to work with Navigator and a plug-in. $115 (10 copies). NCompass Labs, SA2901E.EXE 3.1MB

SiteWriter PLUS 4.0 Define macros that hold the place of text and compile templates into HTML files. $19. Seeberger Media, SW30.ZIP 816KB

WebEdit PRO 3.1 Create HTML pages using syntax coloring, ActiveX control insertion and auto-content wizards. $89.95. Luckman Interactive, WEBEDITS3P.EXE 10.5MB

INTERNET BROWSING

Absolutely On-line 2.0 Send out periodic signals to short-circuit most ISPs' if-idle-then-disconnect rules. $15. JimJams, ABS017.EXE 352KB

Alexa 2.0 Browse a list of URLs derived from your surfing patterns and interests. Free. Alexa Internet (installs automatically from *http://www.alexa.com/download/index.html*)

Bookmark Converter 2.6 Synchronize your Navigator Bookmarks and IE Favorites. $8. Magnus Brading, BMCONV26.EXE 1.1MB

Copernic 98 Perform Web searches on 16 sites simultaneously, remove the duplicates and present the results in a single page. $29.95. Agents Technologies (MEB) Corp., COPERNIC98.EXE 2.2MB

Cover Your Tracks 3.0 Kill cookies, clear your cache and delete URLs from Navigator's history field. $10. Fat-Free Software, CYT3.ZIP 225KB

DigiBand Radio Listen to the radio on your PC via the Internet. $18.95. InfoAnytime. DIGI3SC.EXE 4.8MB

Elephant Tracks 1.01 Keep a searchable index of all words on the Web pages you visit. $24.95. Elephant Software, ELTRACKS.EXE 1.3MB

FullScr 1.5 Site Netscape in its full-screen glory. $10. Stefano Barbato, FLSCR15.ZIP 298KB

InstantFavorites 3.0 Surf the Web with a fully searchable Explorer-style view of your Favorites folder. $20. Sergei O. Ivanov, IFAV30.EXE 148KB

KatieSoft Scroll 3.1 Open up to four Web sites—each with its own browser controls—within one window. $39.95. KatieSoft, SCROLLSETUP.EXE 3MB

Luckman's Anonymous Cookie for Internet Privacy Choose exactly when you want to permit cookie access. Free. Luckman Interactive, SETUPAC_B2.EXE 1.4MB

MemoWeb 2.0 Download an entire Web site to your hard drive. $39.95. GOTO Software. MW200E32.EXE 2MB

Morning Paper 1.7.3 Check your favorite Web sites to find what's changed. $25. Boutell.Com. MORNDST.EXE 172KB

My Yahoo News Ticker Get the news you want, on the topics you want—from the Web right to your Desktop. Free. Yahoo, YNT.EXE 286KB

NeoTrace 1.2 Trace the route from your computer to the Web sites you visit. $24.50. NeoWorx, NEOTRACE.EXE 548KB

NetNote 3 Jot down ideas, annotate pages and link to URLs with Internet-enabled sticky notes. $35. ALShare, NEWNN.EXE 1.2MB

NewsMonger 1.5 Search newsgroups using wizards, filters and schedules. $39.95. TechSmith Corp., NMONGER.EXE 1MB

Opera 3.21 This browser is a smaller download than IE and Netscape, and rigidly sticks to HTML standards. $35. Opera Software, 0321E32K.EXE 1.2MB

Quickseek 3.2 Add a Web search box to your browser. Free. Infoseek Corp., QS32_32.EXE 794KB

SimulBrowse 1.5 Open multiple "tabs" of IE 4.0 and quickly switch among browser windows. $20. SeaGlass Software, SBSU15.ZIP 502KB

Surfin' Annotte Stop your kids from browsing offensive sites. $29.95. Spy-Catcher Corp., SA4.ZIP 5MB (requires Internet Explorer 4.x)

UnMozify 6.1 Explore and index your cache for easy offline browsing. $29.95. Info Evolution Ltd.; for Netscape, UNMOZ_NS.EXE 481KB; for IE, UNMOZ_IE.EXE 471KB

URLMenu 98 2.1 Display a menu of all your bookmarks, and search and scan them for dead links. Free. Paul Dixon, URLMENUS.ZIP 145KB

WebDrive 1.3 Map a drive letter to an FTP site. $39.95. RiverFront Software, WDTRIAL.EXE 2MB

WebFerret 1.3 Simultaneously tap 11 search engines and return results in a sortable list. Free. FerretSoft LLC, WFERET.ZIP 668KB

2,001 Tips/Resources

WebTree 1.5 Keeps sites that you've visited—and the links you didn't follow—in an Explorer-tree format. $25. Paw-Print Software, WTREE15.EXE 1.4MB

Web Twin Convert an entire Web site into a single Help file. $185. DbjectMastery, WEBTWIN.EXE 2.4MB

WWW Address Finder 1.1 Find companies' Web addresses. $10. Scott MacHaffie, WFINDER.ZIP 226KB

INTERNET SERVER SOFTWARE

CamShot 2.4 Add time-stamped images to your Web pages using a video for Windows-compatible camera. $25. BroadGun Software, CAMSHT24.EXE 2.76MB

CaptainDomo for JDK 1.02 This Java-based list server sends and receives messages and supports all the common commands. Free. Xavier Machenaud, CAPTAINDOMO.ZIP 27KB

Dnews News Server Create your own Usenet news server based on news feeds from your ISP. $95. NetWin, DNEWS46J.EXE 2.6MB

Pi3Web 1.0 This multithreaded Web server supports HTTP 1.0, CGI, and proxy, server-side and virtual hosting. Free. John Roy, PI3WEB103.EXE 1.4MB

Serv-U 2.3b Run your own FTP site. $39.95. Cat Soft, SERVU24.ZIP 1MB

Site/C 1.1 Test your Web site for errors and receive notifications by e-mail or pager. $20. Locutus Codeware, SSITEC.EXE 818KB

SLmail 2.6 This POP3/SMTP server includes anti-spam features, mailing list functionality and unlimited-user support. $425. Seattle Lab, SLM30X.EXE 2.3MB

Vsocks Light Connect all LAN users to the Internet via a single connection using this SOCKS 4 proxy server. Free. Paul Smith Computer Services, VSOCK013.ZIP 341KB

War FTP Daemon 1.65 This feature-rich multithreaded FTP server includes robust security and an administration tool. Free. Jgaa, WARD165.EXE 1.6MB

WinGate 2.1d Provide Internet access for your LAN via a rule-based firewall system. It supports proxies for all common Internet protocols. $60. Deerfield Communications Co., for Win95, WG21095.EXE; for WinNT, WG21DNT.EXE 1.7MB

Xitami 2.3 In addition to the main HTTP operations, this Web server supports FTP, MIME, CGI 1.1 and SSI protocols. It can also handle image maps. Free. Imatix, XIW3223D.ZIP 486KB

Z8Server Pro 1.5 Internet server with Web, gopher, FTP and chat services. $69.95. BMT Micro, Z8SPRO.EXE 721KB

404bGone 1.01 Gets rid of 404 errors on NT Internet servers. $59.95. Annex.com, 404BGT02.EXE 1.4MB

NT UTILITIES

BootPart 2.0 Add any partition to NT's Multiboot menu. Free. Gilles Vollant, BOOTPA22.ZIP 25KB

BXCopy 1.0 Crash-proof your work by mirroring data changes on several local or remote backup targets. $79. Mensk Technologies Corp., SW126545.EXE 1.6MB

FreeMem Standard 3 Reserve more physical memory for applications. Free. Meikel JWeber, FREEMEM.ZIP 317KB

Process Tree 2.1 Get details on active processes and loaded DLLs. $34. Software Directions, PTS210.EXE 1.4MB

RemoteServices Manage services on both local and remote machines. Free. Cescara Software, RSWNT050.ZIP 27KB

Swap File Overwriter 1.0 Clear sensitive data from your Windows swap file. Free. Visual Fantasy, SF01.ZIP 195KB

PRODUCTIVITY

After 1.0 Postpone the execution of programs on startup until others are done. Free. Ramon Casha, AFTER.ZIP 45KB

The Bar 2.0 Stay organized with this all-in-one note taker, scheduler reminder and file security app. $15. Widen Concepts Co., THEBAR.ZIP 1.6MB

The Brain 1.5 Organize all the data on your PC using a unique interface. $49.95. Netrificial Software Technologies, BRAIN153.EXE 2.3MB

ClipCache 1.41 Save multiple Clipboard items and organize them into groups. Free. X-Rayz Software, CLIPC141.ZIP 814KB

ClipMate 4.5 Copy multiple selections, then paste them to the Windows Clipboard, edit them or save them for later. $25. ThornSoft Development, CM32_451.EXE 829KB

ClipTrakker1.1 Track multiple Clipboard items and store as many items as you like. $25. Silicon Prairie Software, CLPTRK11.EXE 1.2MB

Desk Pad 98 1.50 Store notes, launch programs and search the Internet from one small screen. $15. Onax Software, DESKPAD98.EXE 2.3MB

Internet Neighborhood 2.1 Integrate FTP and Windows Explorer. $26.50. KnoWare, IN32.ZIP 1.3MB

Judy's TenKey 4.04 This calculator includes an editable running tape and configurable components. $19.99. Judy's Applications, 10KEY404.ZIP 280KB

LaunchPad for Windows 2.84 Perform tasks or display messages at specified times. $29.95. Cypress Technologies, LP32.ZIP 903KB

Perfect Keyboard 98 Pro 2.25 Create shortcuts to insert frequently used text and macros in any app. $20. Pitrinec Software, PKEY8P.ZIP 561KB

Second Copy 97 Backup files automatically to a local or network drive. $29.95. Centered Systems, SETUP97.EXE 716KB

Shortcuts Launch applications, open documents or go to Web sites using function keys. $29.95. Kiss Software, SC-TRIAL111.EXE 776KB

Shorthand for Windows 5.41 Insert frequently used text strings using shorthand characters. $49. OfficeSoft LLC, SH541.ZIP 841KB

Spam Bait Creator 1.01 Fight back against spam by creating fake e-mail addresses. Free. Patrick Sheedy, SPAMBAIT.ZIP 7KB

Spam Exterminator 3.21 Filter junk mail, launch your e-mail program and report spam abusers. $27.95. Unisyn Software LLC, SXSETUP.EXE 1.6MB

View2Plus 3 for Word 97 Compare Word documents by viewing them side by side. $20. Wordwise Solutions, V2PLS97A.ZIP 278KB

Virtual Book Display long text files in a book-like format. $19.95. AyeCor Software, VBOOK32.ZIP 2MB

Visual DialogScript 2.5 Automate programs, control windows and compile code into a self-running EXE file. $69. SADE, VDS25032.ZIP 691KB

WinJorn 2.0 Jot down notes, phone numbers and to-do lists. $14.95. Open Window, JOTTR32.ZIP 250KB

YourTraySpell 2.0 Perform spell checks in any program via the Clipboard. $15. D C AL COOA, YRTSPELL.ZIP 2.7MB

ZipMagic 98 Treat zipped files just like Win9x folders. $39.95. Mijenix Corp., ZM98EVAL.EXE 1.7MB

SECURITY

ChildProof Set up parent-approved application groups for children. $9.95. Renasoft, CHILDPRF.EXE 991KB

Encrypted Magic Folders 98 Hide selected folders, encrypt file contents and scramble filenames. $59. PC-Magic Software, EMF.ZIP 159KB

Guardian 1.2 Password-protect selected resources on your PC. $49. Monnie Mcbride, GUARDIAN.ZIP 145KB

Kremlin 2.11 Delete or encrypt file directories when you log off for added security. $35. Mech5 Software, KREM221.EXE 1.1MB (available at *http://www.mech5.com/kremlin/pc_index.html*)

McAfee VirusScan 3.16 Protect your computer with this virus-detection and repair utility. $65. McAfee Software, V95I318E.ZIP 4.49MB

Mouse Trap 2.5 Confine the mouse to a small password-protected section of the screen. Free. Take a Hike Software, MOUSETRAP.ZIP 29KB

Password Tracker Deluxe 3.48 Securely store your passwords and enter them at log-in prompts. $15. CLRpc Software, PTRACK.ZIP 1MB

VirusSafe WEB 4.0 Detect viruses in downloaded files from the Web. Free. EllaShim, Ltd., VS95V27.EXE 3.8MB

UTILITIES & ENHANCEMENTS

ActiveX Manager 1.3 See which ActiveX controls are on your system, install new ones and delete those that aren't working right. $29.95. 4Developers, AXMGR.EXE 197KB

Add/Remove Pro 1.03 Clean up the Control Panel's Add/Remove Programs list. Free. Super Win Software, ADRMPR01.ZIP 154KB

AnyFolder Assign folders unique icons. $19. Artem Lin, AFOLDERX.ZIP 195KB

AutoMate 4.01 Automate tasks, including sending keystrokes to individual applications. $59.95. Unisyn Software LLC, AUTOMATE.EXE 4MB

BCM Diagnostics 1.01 Diagnose PC problems. $25. BCM Advanced Research, WINDIAG.ZIP 4MB

Clean System Directory 1.6 Identify and safely delete unused files from your \WINDOWS\SYSTEM directory. Free. Kevin Solway, CLNSYS16.ZIP 72KB

CPU Indicator Graphically track your system's CPU usage. $9. PY Software, CPUSETUP.EXE 390KB

Cool Mouse 97 2.1 Maximize your mouse buttons. Free. Kirill M. Kirillov, CM97SET.EXE 239KB

Desktop Informant 2.0 Display file information in a pop-up window. Free. Tom Kier, INFRM20.EXE 1.5MB

2,001 Tips/Resources

Disk-Mom Panel 2.43 Display free space on your drives and in memory. Free. Nikus Siglos, DISKM243.ZIP 145KB

DOSIfnok 2.3 Back up long filenames and use DOS-based backup and archive programs with Win95/98. $10. D.J. Murdoch, DOSLFN23.ZIP 63KB

DoWinStartup 1.0 Skip or launch Start-up applications. Free. DO Software, DOWINSTARTUP10.EXE 603KB

EditPad 3.3 Open multiple files and find/replace across them using this Notepad replacement. Free. John Goyvaerts, EDITPAD.ZIP 298KB

Extended Character Map Add a large preview display to Windows' Character Map app. Free. ArtTech Development, ECM.ZIP 156KB

FastFolders 1.0 Add an entry to the Context menu that lets you display and navigate folder structures. $10. DeskSoft, FFSETUP.ZIP 101KB

FreeSpace 1.0 Reclaim disk space by invisibly compressing directories. $39.95. Mijenix Corp., FSP103EV.ZIP 1MB

Folder Size Shell Extension 2.20 Add a Folder Size tab to the Properties window that lists folders by name or size. Free. Berger Laurent, DFOLDER.ZIP 100KB

Macro Magic Record and play back keystrokes, special Windows keys, and mouse strokes and clicks. $29.95. Iolo Technologies, MMAGIC.EXE 816KB

Master Control Panel 3.5 Gain access through the system tray to just about every setting your PC has to offer. $30. enCOM SYSware, MCP3B.ZIP 1MB

MouseTool 2.04 This tool senses when your mouse stops moving, and clicks the mouse for you. $19.95. JR Software LLC, MT20.EXE 395KB

Multi-App 2.1 Associate a file extension with multiple applications using a drag-and-drop interface. Associations can also be easily removed or edited. $10. Media-Comm Software, MAPP20.EXE 179KB

My Fonts 2.1 Create font packs to organize, load, and switch among all your system fonts on the fly. $35. Mytools.com, MF21X.ZIP 752KB

OuttaSight 2.63 Hide windows by removing them from the taskbar and from the Alt+Tab list. Free. Chris Rosa, OOS.ZIP 420KB

PaneKiller 1.25 Display a listing of every directory and file on your computer using Context menus. $10. MaOdoG Software, PANEKILL.ZIP 257KB

PE Analyzer 1.5.0.2 Display the complete dependency tree of DLL and EXE files. Free. Johannes Plachy, PESX.ZIP 38KB

Peep Show 1.0 Slice a hole in a window so you can see (and click on) anything beneath it. Free. Progency Software, PEEPSHT0.EXE 517KB

Perfect Screens '98 3.01 Create virtual Desktops, each configured with its own toolbar menu. $29. Pitrinec Software, PSCREENS.ZIP 574KB

Properties Plus 1.65 Get detailed information about a drive, folder or file via a right-click. Free. Kush Design, PPLUS165.EXE 231KB

RecoverNT 2.1 Repair trashed FAT16, FAT32 and NTFS drive partitions. $24.95. Sunbelt Software, DEMONT.ZIP 293KB

Registry Editor Extensions Navigate to Registry keys as you type. Free. DC Software Design, REGEDITX.ZIP 219KB

RegMonEx 2.0 Display which sections of the Registry are accessed when an application is run. Free. Jan Sultan, REGMONEX.ZIP 172KB

Scroll++ Scroll by right-clicking *anywhere* in a window and moving the mouse up or down. $12.95. Poindx Corp., SCROLL++.EXE 1MB

Set Me Up 98 Modify tons of Windows 95 default settings from a single, easy-to-reach interface. $35. Omniquad Ltd., SETMEUP.ZIP 2.8MB

SwapMon 1.6 Keep tabs on Windows' swap file. $10. FilgTech International, SWP160.EXE 1.6MB

Targets 1.1 Configure multiple Send To menus to quickly send files to different folders. $10. Moon Software, TARG111.EXE 495KB

Transparent 4.1 Make icon-text background transparent. Free. Jay Guerette, TRANSPARENT41.ZIP 55KB

Trayer Generate a program shortcut that runs the app from the system tray. Free. Ng KimFatt, TRAYER.ZIP 197KB

WinChanger 3.0 Change hard-to-reach Windows settings using an easy to edit format. $8. Patrik Nilsson, WINCHANGE.EXE 743KB

Windows Key Disabler Avoid keyboard slip-ups by turning off the Windows key. $5. Tiny Planet, WINKEY101.ZIP 11KB

WinZip 6.3 Drag and drop to zip and unzip files using this consummate compression app. $29. Nico Mak Computing, WINZIP95.EXE 709KB

WINDOWS CE

BasiCE 1.1b Program on CE-based HPCs without connecting them to a desktop or notebook PC. Free. Dean Geinger, BASICE.ZIP 110KB

Expedia Pocket Streets 2.5 Turn your HPC into an electronic map of more than 50 U.S. cities. Free. Microsoft Corp., PCKST251.EXE 952KB

Net Force Get the tools you need to access the Internet from your HPC. $9.95. Ruksun Software Technologies Pvt. Ltd., NETFOR1W.EXE 2MB

Pocket UnZip 1.0 Bring file compression and archiving to HPCs. Free. Steve P. Miller, PUNZIP10WCE_SH3.ZIP 83KB

PowerToys for Windows CE Add a paint program, cascading menus and a remote control app to control your HPC. Free. Microsoft Corp., HPCV2PT.EXE 1.4MB

Web sites

GENERAL TIPS (Win9x, 3x, NT, CE)

Angela Lilleystone's Windows 98 & NT Resources
http://www.cs.umc.edu/~alilley/win.html

Ben's Internet and Windows Tips
http://www.gv.net/~ben

CMPnet: Business Computing: Windows
http://www.cmpnet.com/search/Business_Computing:Windows

Computer Tips
http://www.chps.com/index.htm

Eric's WinTips Page
http://members.prestige.net/~total/wintips

FixWindows.com—The Windows Troubleshooting Site
http://www.fixwindows.com

Frank Condron's World o' Windows
http://www.worldowindows.com

MDWin.com Tips and Tricks
http://www.mdwin.com/tips

Microsoft Support Online
http://support.microsoft.com/support

More Windows Tips
http://tcp.ca/Jan95/WinTips.html

MS Windows Tips
http://www.robelle.com/smugbook/windows.html

PC Mojo—HTML Hints, Windows Tips and Tricks
http://www.pcmojo.com/pcmojo/helpfulhints.html

Stacy's Tips and Tweaks
http://www.magpage.com/~sneiman

TipCity
http://www.swschool.com/tipcity.htm

***WINDOWS Magazine*: Windows Tips**
http://www.winmag.com/tips

The Windows Mill
http://www.mindspring.com/~ggking3/pages/windmill.htm

Windows Software and Resources
http://desktoppublishing.com/windows.html

Windows Tip of the Day
http://www.wugnet.com/tips

Windows Tips & Secrets
http://www.masteringcomputers.com/cgi-bin/SoftCart.cgi/news3/index.htm?E+aa0008560

Windows Tips Index
http://www.chami.com/tips/windows

WinPlanet
http://www.winplanet.com

Zenez's Windows Tips Page
http://home1.gte.net/zenez

9x TIPS

Captain Sisko's Windows 98 Tips
http://members.tripod.com/~CptSisko/win98.htm

CMPnet's Windows 98 Megasite
http://www.cmpnet.com/win98

Dr. Webster's Windows 95 Page
http://www.123go.com/drw/wepg/win95map.htm

Help, Windows 95: Tips and Tricks
http://www.rainbow.net.au/help/tcpip/win95/tips

M@'s Unofficial Win95 Web Page
http://www.idir.net/~shetters/index.html

MalekTips Windows 95 Page
http://malektips.ehvprogramming.com/windows_95toc.html

MalekTips Windows 98 Page
http://malektips.ehvprogramming.com/windows_98toc.html

Nick's Windows 98/95 Tips, Utilities and Links
http://www.salakin.demon.co.uk/win95.htm

Orlando Windows 95 Tips
http://www.orlando.co.uk/tips.htm

Punit's OS Windows 98 Page
http://members.tripod.com/~punit/win98/win98.htm

2,001 Tips/Resources

SPS Computer & Windows 95 Tips
http://www.j51.com/~sshay/win95/win95.html

Steve's Windows 95 Tips and Tricks
http://members.ee.net/~sstover/frame.htm

Win98 Tips and Tricks
http://www.flash.net/~jpoev/

Windows 95+98 Forum
http://www.kithp.be/freeware/win95board/win95board.html

Windows 95/98 Tips and Tricks
http://www.activewin.com/tips/index.html

Windows 95 and 98 Tips
http://windowstips.hypermart.net

Windows 95 Annoyances
http://www.annoyances.org/win95

Windows 95 FAQ
http://www.mdswab.com/home/pleasure.htm

Windows 95 Tips and Tricks
http://sunflower.singnet.com.sg/~vrvsjv/win95.html

Windows 95 Tips and Tricks
http://www.tmp-houston.com/win95tips

Windows 95—Tips and Tweaks
http://www.gate.net/~jshartt/windows_95/win95tips_and_tweaks.html

Windows 98 Annoyances
http://www.annoyances.org/win98

Windows98.org—The Best Windows 98 Information
http://www.windows98.org/home.html

Windows-Help.net
http://www.windows-help.net/windows95/all-tips.shtml

Windows Tips and Troubleshooting
http://www.iub.no/~bruse/wintips/wintips.html

Windweaver Windows 95 Tips
http://www.windweaver.com/w95tips2.htm

3.x TIPS

Neale Morrison's Windows 3.x Tips
http://www.ozemail.com.au/~nmorrison/wintips.html

NT TIPS

Geo's Windows NT Tips
http://www.nthelp.com

Hotline

3Com Corp.
Megahertz/Mobile Comm. Div.: 801-320-7777. Network Systems Div.: 888-USR-ISDN. Networking: 800-NET-3COM, 408-764-5000. Palm Computing Div., 847-676-1441. Robotics modems: 847-982-5151. **WinIo #551**

Acer America
800-445-6495, automated voice 800-684-2237, Peripherals: 800-452-2277, fax 408-922-2141. **WinIo #552**

Adobe Systems
Acrobat/Capture: 206-675-6304, Dimensions/Illustrator/Streamline: 206-675-6316, FrameMaker: 206-675-6412, Gallery Effects: 206-675-6385, PageMaker: 206-675-6301, PhotoDeluxe: 206-675-6309, Photoshop: 206-675-6303. **WinIo #553**

Agfa
800-879-2432. **WinIo #554**

Allaire Corp.
888-939-2545. **WinIo #555**

Alps Electric
800-449-2577. **WinIo #556**

American Power Conversion
800-877-4080. **WinIo #557**

Anawave Software
(sold to Intermark Corp.)
949-833-1220. **WinIo #558**

Apple Computer
888-APL-VALU, 800-SOS-APPL. **WinIo #559**

Application Techniques
978-433-8464. **WinIo #560**

Apricorn
800-458-5448. **WinIo #561**

Artmedia, USA
800-ARTMEDIA. **WinIo #562**

ATI Technologies
905-882-2626, fax 905-882-0546. **WinIo #563**

Attieva Corp.
888-287-4382. **WinIo #564**

Attachmate Corp.
425-957-4607. **WinIo #565**

Authentex Software Corp.
(now NovaStor)
805-579-6700. **WinIo #566**

Autodesk
800-225-6531. AutoCAD: 800-964-6432. **WinIo #567**

Avalan Technology
(sold to Computer Associates)
516-761-7900. **WinIo #568**

Baseline Data Systems
310-793-0867. **WinIo #569**

BestWare
800-322-MY09, 973-586-2200. **WinIo #570**

Bose Corp.
800-999-2673. **WinIo #571**

Brother International Corp.
800-276-7746, 800-284-4FAX. **WinIo #572**

Business Resource Software
512-251-7541. **WinIo #573**

Caere Corp.
408-395-9319. **WinIo #574**

Calligari Corp.
800-351-7620 x172, 650-390-9600. **WinIo #575**

Campbell Services
800-559-5955, fax 734-542-1805. **WinIo #576**

Canon Computer Systems
800-423-2366. **WinIo #577**

Canyon Software
415-453-9779. **WinIo #578**

Capsoft Development Corp.
(sold to Matthew Bender Corp.)
800-828-8323. **WinIo #579**

Chroma Graphics
650-685-6806. **WinIo #580**

Compaq Computer Corp.
800-OK-COMPAQ. **WinIo #581**

Compuware Corp. NuMega Lab
603-578-8101. **WinIo #582**

Connectix Corp.
877-304-9533. **WinIo #583**

Corel Corp.
WordPerfect Suite 8: 716-871-2325. WordPerfect Suite 8 Legal Edition: 716-871-2314. WordPerfect Suite 8 with Dragon NaturallySpeaking: 716-871-2326. WordPerfect Suite 7: 716-871-2318. Office Professional 7: 716-871-2317. WordPerfect 7: 716-871-2320. Quattro Pro 7: 716-871-2321. Presentations 7: 716-871-2322. Envoy/QuickFinder 7: 716-871-2323. SGML 7: 716-871-2324. **WinIo #584**

CnStar Corp.
203-661-9700. **WinIo #585**

Cottonwood Software
913-663-3022. **WinIo #586**

Creative Labs
405-742-6655, fax 405-742-6633. **WinIo #587**

CyberMedia
301-581-4710. **WinIo #588**

Dagar Software
203-393-2000. **WinIo #589**

Deerfield Communications Co.
517-732-8856. **WinIo #590**

Dell Computer Corp.
Portables: 800-247-9252, Systems: 800-624-9896. **WinIo #591**

DeLorme
207-846-8900. **WinIo #592**

DeltaPoint
(now Site Technologies)
408-461-3020. **WinIo #593**

Diamond Multimedia Systems
541-967-2450. **WinIo #594**

Digital Equipment Corp.
800-354-9000. **WinIo #595**

Dr Solomon's Software
(now part of Network Associates)
888-377-6566, 781-273-7400. **WinIo #596**

Elcon Technology
972-417-5515. **WinIo #597**

EIZO Nanao Technologies
800-800-5202, 562-431-5011. **WinIo #598**

Enorax Microsystems
800-419-4943. **WinIo #599**

Epson America
800-GO-EPSON, 800-442-2110. **WinIo #600**

Everex Systems
800-282-3312. **WinIo #6301**

Executive Software
818-547-2050. **WinIo #602**

FileMaker
408-727-9004. **WinIo #603**

Forté
750-431-8460. **WinIo #604**

FTP Software
800-382-4FTP, 978-685-3600, fax 978-794-4484. **WinIo #605**

Gateway
800-846-2301. **WinIo #606**

Global Village Communication
NewsCatcher: 408-523-1040, Utilities: 561-241-8088, option 3. **WinIo #607**

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GoldMine Software Corp.
510-659-1222, fax 510-659-8222
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HANT Software
919-785-5200 WinFo #609

Hansol Multitech
888-HANSOL1 WinFo #610

Hayes Microcomputer Products
770-441-1617 WinFo #611

Hercules Computer Technology
800-323-0601 510-623-6050
WinFo #612

Hewlett-Packard Co.
General info, 800-333-1917. Desktop/Portable Computers: 970-635-1000, CopyJet, DeskJet, JetDirect/PrinterPal, OfficeJet, Scanners: 208-323-2551, Pavilion: 208-323-4683. Workgroup Networks Division: 970-635-1000.
WinFo #613

Hewlett-Packard Co., Colorado Personal Storage Solutions
Mass Storage: 970-635-1500
WinFo #614

Hi-Val
800-448-2596 WinFo #615

IBM Personal Systems
800-772-2227, fax-back 800-426-4FAX. Out-of-warranty support: 900-555-CLUB. BBS 919-517-0001

IBM Software
800-426-3333

IBM Storage Systems Division
Hard drives: 888-IBM-5214. Large systems, software, open systems and removable media: 800-237-5511

ICQ
support@ICQ.com WinFo #616

Imation Corp.
888-466-3456, fax-on-demand 800-328-9438. SuperDisk: 800-888-2700.
WinFo #617

InContext Corp.
877-364-0409, WinFo #618

InfoAccess
425-201-1916, fax 425-201-1922
WinFo #619

Inprise Corp.
Installation support: 831-461-9144. Primary assistance: 888-456-2003. Developer assistance: 888-683-2378
WinFo #620

Insight Software Solutions
801-295-1890, fax 801-299-1781
WinFo #621

Inso Corp.
DynaText and DynaTech, 800-231-2002. Quick View Plus, 800-333-1395
WinFo #622

Intel Corp.
CPU, OverDrive processors and math coprocessors: 800-321-4044. Network and ProShare conferencing/video products: 916-377-7000. Intel Create and Share Camera Pack: 916-377-7000. StrongARM processors, PCI bridges and 21xxx Series network components: 978-568-7474
WinFo #623

Interleaf
800-688-5151, Jamba: 800-456-5323
WinFo #624

Interlink Electronics
800-340-1331, fax 805-484-8883
WinFo #625

Intuit
800-4-INTUIT, fax 800-644-3198.
WinFo #626

Iomega Corp.
800-879-7660, fax-back 801-778-5763. Zip, Jaz, Buz and Ditto products: 888-4-IOMEGA (warranty support, free of charge if product is determined to be defective, otherwise, $14.99 to $19.99 per incident). WinFo #627

JAMLogic Software
800-750-8113, WinFo #628

Janna Systems
541-864-7270 WinFo #629

Jase Software
612-930-9171, fax 612-930-9172.
WinFo #630

Jetstream Communications
800-INFO-JET, 888-435-7538
WinFo #631

Kensington Technology Group
800-535-4242, fax 610-231-1039
WinFo #632

Kinetix
415-347-2254 (10 days free support beginning with first call), 800-225-6531 ($65 per incident after 10 days), fax 415-448-1919 WinFo #633

Kurzweil, a division of Lernout & Hauspie
800-380-1234, fax 781-238-0986/0987
WinFo #634

LaserTools Corp.
Support@lasertoolscorp.com
WinFo #635

Lexmark International
800-LEXMARK WinFo #636

Logos Technology
888-464-8765 (registered products only).
WinFo #637

Logitech
800-231-7717, WinFo #638

Lotus Development Corp.
All Passport plans: 800-268-8720. Pay per incident—cc:Mail: 800-804-8380. Desktop: 800-553-4270. Notes: 800-437-6391

L-Soft International
800-399-5449, 301-731-0440 (contracted support) WinFo #639

Luckman Interactive
213-614-0966, fax 213-614-1929.
WinFo #640

M & R Technologies
407-951-2268, WinFo #641

Macromedia
415-252-9080, fax 415-863-4409, fax-on-demand 800-449-3329.
WinFo #642

Marketwave
206-682-6801, fax 206-682-6805 (registered and trial products)
WinFo #643

Matrox Graphics
514-685-0270, fax 514-822-6363
WinFo #644

MediaPath Technologies
215-508-3463, fax 215-508-3459
WinFo #645

Mediabnx Peripherals
819-829-8749 WinFo #646

MetaCreations Corp.
831-430-4058 WinFo #647

Metricom
800-543-0721 WinFo #648

METZ Software
425-444-4525, fax 425-644-6026.
WinFo #649

MGI Software Corp.
905-764-7291, 905-764-8447 (Photo Suite/Video Wave)
WinFo #650

Micro Express
800-989-4832, 949-852-1400, fax 949-852-1225
WinFo #651

Micrografx
972-234-2694 WinFo #652

Micron Electronics
800-877-8856, fax 800-270-1232.
WinFo #653

Microsoft Corp.
Standard support (dial 425-635-): Access: 7050, Excel: 7070, FrontPage: 7088, General hardware: 7040, Internet Explorer: 7123, Liquid Motion: 7103, Office: 7056, Outlook: 7031, PowerPoint: 7145, Project: 7155, Publisher: 7140, Schedule+: 7049, Windows 95: 7000, Windows 98: 7222, Windows NT: 7018, MS-DOS: 425-646-5104, Word: 425-462-9673. WinFo #654

Micro Solutions
815-756-4500, fax 815-756-4926
WinFo #655

Microtest
800-638-3497, fax 800-419-8991.
WinFo #656

MicroTouch Systems
800-MICROTOUCH, BBS 978-659-9250.
WinFo #657

Milenix Corp.
303-245-8000, fax 303-245-8111.
WinFo #658

Mitsubishi Electronics America
800-843-2515, fax 800-937-2094.
WinFo #659

Mitsumi Electronics Corp.
800-801-7927 WinFo #660

Motorola Internet and Networking Group
800-544-0062, fax 508-281-7072.
WinFo #661

Mylex
510-808-2400, fax 510-745-7715.
WinFo #662

NEC Computer Systems Division
All products, 888-329-0088, Direction desktops: 800-632-2678, Express5800 servers, 800-325-5500, MobilePro HPCs: 800-632-4525, PowerMate desktops: 800-632-4585, Versa notebooks: 800-632-4525. WinFo #663

NEC Technologies
Monitors: 800-632-4662, Presentation products: 800-836-0655, Printers: 800-NEC-INFO. WinFo #664

NetGear, a Bay Networks company
800-211-2069, WinFo #665

NetObjects
888-888-3993, WinFo #666

Netscape Communications Corp.
650-937-3777 (single user), 650-937-2555 (corporate customers). WinFo #667

Network Associates
972-278-6100 (single user), 408-988-3832 (corporate users), fax 408-980-3660.
WinFo #668

2,001 Tips/Resources

NewSoft
510-445-8618, fax 510-445-8601.
Winfo #669

NewTek
210-341-8444, fax 210-370-8030.
Winfo #670

Nico Mak Computing
860-429-3539. Winfo #671

Nokia Display Products
800-483-7952. Winfo #672

NovaWeb
510-249-9500 x3. Winfo #673

Novell
888-321-4272. Winfo #674

Number Nine Visual Technology Corp.
781-869-7214, fax 781-869-7222.
Winfo #675

Oakley Data Services
801-295-1890. Winfo #676

Okidata
800-OKIDATA, 609-235-2600.
Winfo #677

Olympus America
800-347-4027 x4, 516-844-5000.
Winfo #678

Options by IBM
800-772-2227, 800-IBM-4FAX.
Winfo #679

Ositech Communications
888-OSITECH, 519-836-8063, fax 519-836-6156. Winfo #680

Ositis Software
888-946-7769, 925-734-1900, fax 925-734-1904. Winfo #681

Pacificimage Electronics
310-214-5281x4, fax 310-214-5282.
Winfo #682

Palm Computing, a 3Com company
847-982-5151, 847-876-1441
Winfo #683

Palo Alto Software
800-229-7528, 541-683-6162 x2, fax 541-683-6250. Winfo #684

Panasonic
Communications & Systems Co.:
800-742-8088. Computer Peripheral Co.:
800-742-8087. Office Products Co.:
800-CALL-FAX, fax 201-392-4826.
Winfo #685

Peachtree Software
770-492-6311. Winfo #686

P.I. Engineering
517-655-9523. Winfo #687

Plasmon Data
800-451-6845 x3, 612-946-4100.
Winfo #688

Plextor Corp.
408-980-1838 x3, fax 408-986-1010.
Winfo #689

PowerQuest Corp.
801-226-6834, fax 800-720-0391 or 801-437-7921. Winfo #690

Powersoft Corp.
800-8-SYBASE, 617-564-6148 (East), 773-864-7288 (Central), 510-922-3911 (West). Winfo #691

Primavera Systems
610-667-3030, fax 610-667-0652.
Winfo #692

Princeton Graphic Systems
800-747-6249, 714-751-8405.
Winfo #693

ProVenture
970-522-3000. Winfo #694

Proxima Corp.
800-447-7692, 619-457-5500.
Winfo #695

Puma Technology
800-888-1400. Winfo #696

Qualcomm
800-2-EUDORA. Winfo #697

Quantex Microsystems
800-864-8850. Winfo #698

Quantum Corp.
800-826-8022, fax-back 800-434-7532.
Winfo #699

Quark
303-894-8889. Winfo #700

Quarterdeck Corp.
All products: 573-875-0530 (standard), 800-339-1136 (priority). IWare Connect: 573-499-4558. Utilities: 573-875-0932 (standard), 800-339-1136 (priority)
Winfo #701

Rand McNally New Media
847-982-0944, fax 847-675-6368
Winfo #702

RealNetworks
206-674-2680. Winfo #703

Ricoh Corp.
800-225-1899 x1694. Winfo #704

RightFAX
520-320-7000, fax 520-321-7461
Winfo #705

Samsung Electronics America
800-SAMSUNG. Winfo #706

Seagate Software
604-669-8379. Winfo #707

Seagate Technology
408-438-6222. Winfo #708

Seanix
888-252-1197. Winfo #709

Sequel Technology Corp.
800-881-2465. Winfo #710

Sharp Electronics Corp.
800-237-4277. Winfo #711

ShowBase Media
800-685-9888, 619-685-2273
Winfo #712

SkiSoft Publishing Corp.
800-882-3622, 781-883-1876.
Winfo #713

SL Waber
800-634-1485. Winfo #714

SoftQuad
416-544-8879. Winfo #715

Software Publishing Corp. Holdings
ASAP, Harvard, Professional Write: 970-522-9064, OnFile: 407-333-4160.
Winfo #716

Sony Electronics
800-326-9551, 416-499-1414, fax-back 800-883-7669. PCs/notebooks: 800-4-SONY. Storage: 800-587-5649.
Winfo #717

STB Systems
800-234-4334, 972-669-0888
Winfo #718

Symantec Corp.
541-345-3322. Winfo #719

SyQuest Technology
510-226-5400, fax 510-226-4120
Winfo #720

Tandberg Data
305-379-1000, fax 805-379-2555.
Winfo #721

Tax Defenders
213-250-1152. Winfo #722

Tektronix
800-835-6100. Winfo #723

TigerDirect
888-777-8200, fax 305-228-3400.
Winfo #724

Toray Industries
800-TORAY-PD. Winfo #725

Toshiba America Information Systems
888-598-7800. Winfo #726

Traveling Software
800-343-8080 x4, 425-483-8088
Winfo #727

Trellix Corp.
503-684-4647. Winfo #728

Tripp Lite
312-755-5400, fax 312-644-6505 or 773-869-1234. Winfo #729

Tympani Development
408-735-9555, fax 408-735-9550
Winfo #730

Ulead Systems
310-523-9393, fax 310-523-9399
Winfo #731

UMAX Technologies
Scanners, network support: 510-651-8883. Action Book: 888-815-8629. Pentium II 300MHz: 800-290-3697. Other: 800-379-2850. Winfo #732

Utobia Systems
888-4-UTOBIA, 626-255-5080.
Winfo #733

VisGrafix
Software products: 918-825-4844, 918-825-6359. Training products: 918-825-6700. Winfo #734

ViewSonic Corp.
800-888-8583, 909-869-7976.
Winfo #735

Virtual Motion
415-778-0100, fax 415-778-0129.
Winfo #737

Visio Corp.
541-882-8687, fax 541-882-8446.
Winfo #738

Visioneer
888-368-9833, 888-368-9633, option 2.
Winfo #739

VitalSigns Software
VitalSuite, intranet solutions: 408-919-2536. NetMedic, Net Medic Pro: 408-919-2619.
Winfo #740

WinBook Corp.
800-480-9184, 814-481-7465.
Winfo #741

WRQ
800-872-2829. Winfo #742

Xerox Corp.
800-TEAM-XRX. Winfo #743

Xircom
805-376-9200, fax 805-376-9100.
Winfo #744

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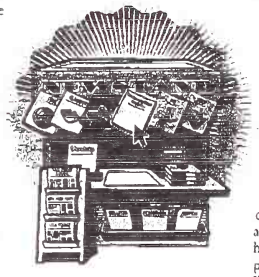
Value-Added Publishing

Without question, electronic publishing is one of the hottest topics in computing. Groups worldwide want to know how to do it well, how to advertise it effectively, how to enhance the capabilities of electronic publishing to include emerging multimedia technologies, and, most of all, how to make money at it. In the future it will be increasingly important for successful publishers to add value to publications over and above the original content.

This column outlines some of the fundamental issues connected with the addition of value to electronic publications. Some of these issues have already been translated into products and services, while others have not.

Information Delivery in the Gilded Age of Computing

While the term electronic publishing takes on a variety of different meanings in different settings, one core principle holds true across all domains: electronic publication involves the distribution of digital documents. In its simplest form, electronic publishing may amount to little more than a "porting" of printed information over to the digital networks via scanning, OCR technology, and so forth. Augmented with some very basic accounting software, many publishing sites are in the business of serving up static HTML versions of their publications via the Web. In its more complex forms, however, electronic publishing will redefine itself in the light of available computer and network technologies. Our present goal is to outline the ways in which this redefinition may be achieved.



Although most of the critical technologies needed for electronic publishing have existed for decades, it has only been in the last few years that traditional, in-print publishers have taken it seriously. There were two basic reasons for this delay—one technological and one pragmatic. On the technology side, the primary intended venue for electronic publishing, the World-Wide Web, lacked two essential capabilities. First, it lacked secure HTTP transactions until about 1995. Without secure transactions, selling via credit cards would entail excessive risk due to digital eavesdroppers, packet sniffers, and other network nematodes. At the same time, there were no widespread standards for, and implementations of, electronic billing systems. Means had to be developed to charge in millicent amounts and accumulate charges until they reached cost-effective invoicing limits. These two pieces of technology were in place (in a variety of different forms, in fact) around mid-decade, thereby making the simpler forms of electronic publishing possible.

On the pragmatic side, no one knew (in fact, it could be argued that it's still unknown) how to develop a sound business plan for electronic publishing. While it was widely assumed that adding electronic publishing products would irrevocably change the economics of publishing, few felt comfortable in speculating whether this would ultimately be good or bad for the industry. Many publishers jumped on the electronic publishing bandwagon for the worst of reasons: they were afraid of being left out of the future markets. In so doing, they packaged intellectual property basically the

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same way as Gutenberg did except for the addition of digital delivery mechanisms.

That is the primary cause of the popularity of digitizing anything and everything in print; herd mentality dictates that if you don't have a good plan, do what everyone else does or thinks they should do.

In any case, all of the essential hooks for electronic publications are now in place. Advanced publishers can solicit, edit, produce and distribute electronic publications with not so much as a single piece of paper changing hands (not including signed copyright transfer forms and contracts, of course). The Web and the Internet has forever changed the face of publishing. But is this for good or ill?

THE BIGGEST MISCONCEPTION about electronic publishing is that its value lies in the ability to disseminate digital information over computer networks in a manner analogous to physical distribution of hard copy. There seems to be a tacit faith in a twisted variation of Metcalfe's Law (the value of the Internet increases with the square of the number of nodes) to the effect that the value of electronic publishing increases with the square of the number of documents on the Internet. While this sounds good, it's likely to be false. It is more likely that the value of electronic publishing varies inversely with the square of the number of documents.

Potential Metalevel VAP Enhancements

Confidence Indicators

- Listing as citation classic by authoritative source
- Document status indicator (preprint, archived, old, not recently viewed)
- Awards received (weighted by importance, source)
- Reviews of document in the literature
- Referee reports from peer reviewers
- The perceived quality of the imprimatur
- Vetting by some community or constituency (praised by newsgroup, professional association, anthologized by reputable editors, and so forth.)

Recommending Systems

- Community review systems (Firefly [www.firefly.com])
- Helper agents
- Information "brokerage" to facilitate connection (by vendor/brokers, fulfillment agents, aggregators, and the like)
- Hyperlinked review chains (which interconnect all reviews of a document irrespective of source)
- Amalgamated or virtual reviews (which merge elements of individual reviews over related documents)
- Virtual editors ("personalized" variant of an electronic publication created by someone other than the author)
- Searching, indexing and database technologies

More Interactive and Participatory Than Current Systems

- Provide dynamic, real-time document clustering with innovative clustering topologies for display of results
- Preprint servers for preserving the ancestry of documents
- Postprint (archive) servers for maintaining definitive versions
- Data mining, including techniques based on association, sequence-based analysis, clustering, classification, estimation, fuzzy logic, genetic algorithms, and neural networks
- Data warehousing and data repositories (the ACM Computing Research Repository (www.acm.org/corr/) and ACM Digital Library (www.acm.org/dl)

Document Persistence Technology (www.sciam.com/0397issue/0397kahle.html)

- Formal methods for post-hoc data utilization (which structure data differently or anticipate new data demands)
- Cyberspace snapshots that provide backups of documents whose links are fractured
- Version archiving strategies for citation permanence
- Variable-Link-Strength Technology Based upon Frequency of Use Statistics or User-Centered Evaluations
- Frequency of access and average visitor ratings of a site
- Detection of the number of inbound links to a particular site

This misconception has driven virtually every publisher into some form of electronic commerce. Nowhere is this more obvious than with academic and scholarly publications. Seen as a way of mitigating against the problem of slumping sales and an annual 5%–10% downturn in subscriptions, electronic offerings are thought to hold out the greatest promise of revenue growth—even a modest 5%–10% annual growth. But this reasoning ignores the fact that the decline of the academic publishing industry is inextricably linked to the overall economy, the widespread perception that there is already too much information available for most personal bandwidths, and the perception that only a small percentage of the information in the typical publication is relevant. Readers are, therefore, "voting" with their pocketbooks by canceling subscriptions. Publishers worldwide are assuming electronic publishing is the silver bullet that will save the day. Some publishers point to the capabilities of the networks to lower overhead and production costs, support a wider variety of advertising and marketing venues (for instance, broadcasting, narrowcasting, and personal-casting), and the ability to increase margins by dealing directly with the reader rather than distributors and middlemen as signs electronic publication will provide new opportunities for publishers seeking to turn their fortunes around. In other words, some

Document Persistence Systems which Help Ensure the Longevity of Linked Resources Especially with Respect to Mission Critical Environments (medical information systems, patents, copyrights, commerce)

- Revision control systems/version retention systems
- Web "snapshot archives"
- Version validation systems

Virtual Authoring

- Virtual documents (such as process-oriented document creation systems in which documents have no reality apart from current presentation)
- Dynamic contextual annotation added by authors and readers (like "pop-up" videos on cable television's music channel, VH1)
- Trans-publishing in Ted Nelson's sense (www.sfc.keio.ac.jp/~ted/)—where documents take on hyperstructure as they evolve in a structured way by inclusion of different authors and participants (projects Xanadu [www.xanadu.net] and ZigZag [www.xanadu.net/zigzag/]).
- Group authoring technologies (perhaps an outgrowth of computer-assisted, cooperative work, groupware)

Dynamic Document Creation (in which the documents are revised continuously)

- Author-revision systems (Stanford's Encyclopedia of Philosophy [plato.stanford.edu])
- Author and reader revision systems (the good, the bad, and the ugly site www.acm.org/~hlb/email_gbu/)
- Thought swarms and "idea structuring"
- Online ACM Computing Reviews (in development)

II. Information Customization (see www.acm.org/~hlb/publications/cb5/cb5.html)

- Client-side document extraction
- Non-prescriptive, non-linear document traversal (not prescribed by document provider)
- Multi-document "collage" interface for multi-way look-ahead
- Related emerging technologies which will support value-added publishing
- Safe, open distributed archiving (Alexa [www.alexa.com])
- Ted Nelson's transcopyright system (www.sfc.keio.ac.jp/~ted/)
- Security enhancements
- Watermarking and digital steganography (www.acm.org/~hlb/publications/dw_n/dw_n.html)
- Push technology (www.acm.org/~hlb/publications/push/push.html)
- Citation tree construction
- Agent-based citation locators (www.uark.edu/~iorg/)

publishers are working under the assumption that the decline in interest in scholarly and technical publications can be reversed if just those publications could be produced and marketed more cheaply electronically. It just won't work that way; the publications avoided in hardcopy will be avoided in electronic form as well.

If the digitization of things publishable won't get us far, what will? The payoff in electronic publishing in the future will be the deployment of new technologies for the integration of digital documents into the network fabric of associated ideas, texts, times, and people. Publishers will need to be more than just the providers of digital documents from their digital warehouses. They will also need to connect a document with its contexts. Thus, a digital document could be tightly integrated into the cybersphere of all related documents in a way that traditional publishing cannot permit. Such publishing could provide not just the documents, but their connections to other data sources, as well as other valuable information. This is the essence of "value-added" publishing.

VALUE-ADDED PUBLISHING (VAP) is a natural extension of traditional publishing with the additional feature that the publication vehicles and venues accept from and react to additional, previously integrated and assimilated networked media. The challenges of VAP are likely to lie in such areas as:

- Content enhancement
- The encouragement of synergy between and among information providers, information consumers, and the resources they share
- The addition of interactivity and feedback loops to traditional delivery systems
- A reorientation of both the information provider and information consumer toward the "process" of publishing, rather than a focus on the individual products and services
- Metalevel analyses and intelligent restructuring of document collections
- Ad hoc document quality ranking and recommending systems

As one can see from this partial list of services, VAP must use a more advanced set of computational and network tools from that of its early electronic publishing ancestors. We illustrate these points with a selected enlargement of some of the aforementioned categories.

Content enhancement. One convenient way of viewing electronic publishing is as the exchange of information between an information provider and a information consumer via an intervening computing network infrastructure. While the content of a document is central to this exchange, it is not necessarily paramount since its value is utilitarian rather than intrinsic. That is, the value of the content is not independent of the ability of people to read it, view it, use it, reference it, and so forth. From the point of information retrieval, information which cannot be found or used is worthless.

Content enhancement involves the study of enrichment of the semantic and syntactic content of a document. The enhancement of semantic (alt., conceptual, deep) content can be thought of as an attempt to extract more meaning from the documents. A report, summary, extract, abstract, translation, or "gist" by an intelligent agent would be considered a semantic enhancement in this sense, as would results reported by natural language understanding and translation systems, and the automated inclusion of new hyperlinks.

The enhancement of syntactic (alt., grammatical, tag-based) content, on the other hand, would affect the way documents are structured, indexed, taxonomized and linked within the intervening network and computer resources. An example of enhancing syntactic content would be adding structure to documents for the benefit of helper agents, search engines, indexing tools, data mining, and warehousing applications.

Value-added metadata. While content enrichment of electronic publications is the holy grail of VAP, it is at the same time the most difficult strategy to implement. Some problems (complete natural language understanding, for one) are intractable given the current state of the computationalists' art. Adding value through metadata, while less ambitious, holds out much greater promise in the short term.

Metadata is information "about" an electronic document, resource, or the operation of a computer system. For example, "confidence indicators" might provide useful information about a document or resource. We would expect that knowing an

electronic publication produced a Pulitzer Prize would increase the credibility of the author and the value of the document (at least as an object of study), as would favorable reviews by the leading authorities on the subject, for example. The imprimatur of a publication might also be relevant, as some electronic publishers might be known to have higher standards than others.

Similarly, recommender systems assign assessments or recommendations to documents and resources that are as reliable as the confidence one has in the recommender system. Helper agents, brokerage systems, flash lists, and so forth also provide metalevel value in their evaluation and recommendation of documents.

Revision control systems, which collect metalevel information about various versions of a document, add value by helping create stability and continuity in network documents. In these systems, versions of documents are indexed in such a way that any particular version may be retrieved, with or without its predecessors or ancestors.

The sidebar illustrates the types of enhancements that might result from the judicious collection and use of metalevel information about electronic offerings.

Feedback, Interactivity, and Support

Content-based and metadata-based value-adding are two of the four strategies for building value in electronic publications. We add to the list two more components: (1) feedback-based value-adding and (2) interactive value-adding. Services of this type collect data from users that reflects their perceptions of their experience. Out of that collective experience might come useful comments, identifications of "hot" documents by some measure of use, average rankings of sites, group interactions, and so forth that will speak to the issue of the perceived value of content.

To this we must also add support-based value-adding—technologies that may not directly add value to a document, but that support the addition of value by other means. In other words, they are necessary conditions for the deployment of a VAP system. This might include database technologies, statistical and clustering tools, revision control system software, editing tools, information customization clients, and so forth.

Electronic publishing in the next century will be fundamentally different than it is today. I predict the most successful, early applications of VAP will be such things as:

- Publications with limited commercial appeal
- Publications with narrow audience appeal
- Digital digests (i.e., personalized magazines assembled from many sources)
- Focused retrieval publications (personalized encyclopedias)
- Home-grown, personal publications
- Interactive publications
- Public interest/public awareness publications
- Reference materials

Electronic publishing will evolve as developers and researchers are inspired to take more extensive advantage of computing and network technology, and slowly but inexorably move away from the notion that the paramount value of a document is its content. Additional enhancements such as those outlined in this column will establish the importance of the role of the digital or cyberspace context of information.

Many of these thoughts have evolved as a result of my serving nearly six years on the ACM Publications Board. By continually revisiting the questions of what we were doing and why we were doing it, this conceptual overview of the future of electronic publications began to take shape. The launch point was my belief (controversial, as it turned out) that ACM should move away from the policy of holding copyrights for its publications (www.acm.org/pubs/copyright_policy/). I remain convinced that trying to fix one version of an electronic publication as definitive and copyrightable will prove as difficult as trying to paint falling leaves. In my view, electronic publications of the future will resemble filmstrips—each frame will incorporate some improvement, alteration, or reference which (in the ideal case) will have more value than its predecessor. In this sense, Ted Nelson's notion of transpublishing is much like many layers of intersecting filmstrips, each of which has one cell that aligns with the cells of others.

HAL BERGHEL is a professor of computer science at the University of Arkansas and a frequent contributor to the literature on cyberspace. His virtual home is www.acm.org/~hlb.

YOUR WEB SITE

Let's Get Sticky

Don't just count hits—generate hits that count and turn into sales

TOM COX IS THE KIND OF GUY WHO likes sticky situations. Cox, 31, president of the New Iberia, La.-based Golfballs.com (www.golfballs.com), has sold over a million balls to Net surfers in all 50 states and 30 different countries. What's his secret? He's got a few, actually. "Be the first type of your business online," he says. "You can capture an entire market that way. Everyone else is just a bad copy." His pricing is competitive, too. But neither factor accounts for the 1,000 visitors he gets each day, the 30-plus daily orders he generates at an average clip of $60 apiece, or the site's 300 percent annual growth rate.

These impressive sales numbers stem at least partially from the extra features Cox has placed on the site—elements designed to encourage visitors to linger long enough to make a purchase. For instance, Golfballs.com includes an exhaustive golf joke area that encourages readers to add to the list, an illustrated history of golf that chronicles the evolution of the game, a registration for free weekly prizes, and a descriptive section that illuminates the differences between balls in precise detail. Spend a half hour on Cox's site and you'll feel like an expert on those little dimpled orbs—and perhaps you'll feel primed to key in your credit card information and make a purchase.

That's the theory, anyway. The quality of attracting longer and more frequent repeat visits, popularly called "stickiness," is the latest Holy Grail that Webmasters are seeking to help them grab their share of the e-commerce market, which some estimate could reach $2.1 trillion by 2001. According to the Internet navigation service Alexa, the Web doubles in size every 8 months, with nearly 1.5 million pages added every day. But the market measurement firm MediaMetrix reports that the average home surfer spends just four hours a week online, and RelevantKnowledge points out that most of those minutes go to sites backed up by big bucks—surfers spent an average of 69 minutes at the *New York Times*'s site last August, 35 minutes at MTV's, and 19 at Travelocity's. Even worse, says Evan Schwartz, author of *Webonomics*, the average time spent at any site is a fleeting "three to five minutes."

How, then, can you get surfers to come on in and sit a spell at your site? "Provide personalization," answers Schwartz. "Tell people about themselves. Let them look up their account balances, their frequent shopper



points. People ultimately only want to know what's going on in the world as it pertains to themselves."

Forrester Research analyst Chris Charron agrees: At one point, "users who personalized the Excite search engine for themselves were five times as likely to come back" as those who didn't. That's why Cox will enhance Golfballs.com this year with real-time inventory checks for surfing golfers. He's also developing one-click shopping, so repeat visitors will just type in their passwords for a no-hassle shopping experience with a system that knows who they are and what they want.

Adding entertainment value to your site is another way to get sticky, says Betsy Zikakis, retail segment director for e-commerce software provider Open Market. "Sell an experience. Get the site to mimic or show your product, so that they can't really separate the experience from the product they'll purchase, like Disney and gaming sites do."

You don't have to be Disney to provide an experience that makes surfers want to stay, then buy. B-Movie Theater (www.b-movie.com), for example, douses video shoppers with the best of the bad film experience—like *Attack of the Giant Leeches*.

B-Movie site producer Ron Bonk was shipping only five to 10 tapes a week when he first put up the site. Like Cox, however, Bonk added features designed to glue surfers to their screens, including a free online horror magazine, a free e-mail newsletter, and a massive inventory of films to browse—some 5,000 in all, from *Redneck Zombies* (the director's cut) to *Female Plasma Suckers*. Now, the 29-year-old's three-employee business receives over 100,000 hits a month and sells 150 to 200 videotapes weekly.

Best of all, Web site personalization won't break the bank. Charron suggests that communication services such as instant messaging, e-mail accounts, and a constantly changing newsfeed at your site can involve people enough to keep them returning. And these software tools—counters, chat tools, messaging boards, surveys, news tickers, even databases to search your site—are yours for the downloading from resources such as The Free Site (www.thefreesite.com).

Not surprisingly, Free Site operator Marc McDonald is an advocate of sticky tactics. He ropes in customers with a gratis e-mail newsletter, then gets them to stay by constantly renewing the site's content. Visitors linger at the site for anywhere from 15 minutes to an hour—up to 20 times the average for other sites.

"If you have a simple, easy-to-read site that offers fresh and new content on a regular basis, it will always draw more visitors than a cutting-edge site with lots of eye candy," says McDonald. The only difference, he adds, is that your customers "will stick like cotton candy."

—Charles Pappas

ILLUSTRATION BY DOUG HORNE

FROM : ANTENNA GROUP PHONE NO. : 415 896 1094 Jan. 21 1999 11:21AM P3

NH-020 DAILY NEWSPAPER
CONCORD MONITOR
Concord, NH

Circ - (M) 21,512 (S) 22,900

JANUARY 3, 1999

Bacon's

3985-A

Whatever you've said online, you're history now

By JOHN NAUGHTON
London Observer Service

A few weeks ago I wrote a column about the celebrated "Halloween Memo" in which a Microsoft engineer explained the threat to the company posed by the "Open Source" software movement.

The day after the article appeared I had a call from a well-known computer journalist. "What a nice piece," he said. I remarked that I was gratified to know he read *The Observer*. "Oh, I don't, dear boy," he said. "I read the article on the Net."

Someone had posted a copy of my piece (with full attribution) on what my caller described as "the ultimate geek site" – www.slashdot.org – a significant honor in Net terms, for this is a site thousands of hackers consult regularly. It's the nearest I'll get to a Nobel prize.

There are about 300 million Web pages, but their average life is only 75 days. So if you post something silly, you're safe, right?

In an effort to find out where else the piece had washed up, I looked myself up on AltaVista. Among the results was a puzzling item from the David Hare papers at the University of Texas at Austin. Now I know Hare slightly and admire him greatly, but an interest in Open Source software was not something I had hitherto discerned in him. So I followed the link and found that it led to a letter I had written to him many years ago.

How come? My guess is that instead of waiting until he's dead, Hare is handing over his papers in batches to the Humanities Research Center at the University of Texas. There, they are conscientiously catalogued, and the index to the burgeoning archive is published on the Net. So anyone can find out that I wrote to him once – though at present they can find out what I said only by flying to Austin.

Makes you think. The Net is not only a publication medium, but a data-retrieval system, too. Until now, people haven't worried about that because it seemed such a transient medium. There are about 300 million Web pages out there, but each has an average life of only 75 days because sites are changed or abandoned. So even if you publish something foolish it can always be withdrawn from the server, can't it?

Yes, but that might not make any difference. In San Francisco, Brewster Kahle runs a vacuum-sweeping operation, Internet Archive (www.archive.org), and if you've made a fool of yourself online, he probably has the evidence. His motives are impeccable: He wants to preserve what was published on our dominant communications medium.

But if you don't want to be caught in his net, don't do it on the Net.

Presidio Offering Solution to Your Daily Commute

Thousands of Bay Area high-tech workers creep and crawl to work every morning, stuck in the traffic jams that seem to get worse each week.

But that scene is only a bad memory for a number of staffers at Alexa Internet, a San Francisco maker of software that helps Web surfers find similar sites. The company's offices are at the Main Post area of the Presidio, and eight of the company's 34 employees live on the Presidio grounds. They pay what's considered "market rate" rent (nobody would say what they were paying), but they get an easy commute and can't-be-beat surroundings.

It starts at the top: CEO and co-founder Brewster Kahle lives in what once were Army general's quarters on Upper Simmons Loop. The home comes complete with a knockout view of the Golden Gate Bridge.

Alexa's marketing chief, Cynthia Lohr, lives in what she describes as a "modest 2½-bedroom" unit that once housed a colonel's family. Lohr, who lived in Berkeley for 10 years and describes herself as "an East Bay-er at heart," says she jumped at what she calls a "once-in-a-lifetime opportunity" to erase her commute and live on the Presidio.

If the Presidio Trust has its way, there will be many more companies like Alexa with a significant number of Presidio residents. With more than 1.2 million square feet of non-residential space currently leased or available for lease, Presidio managers hope to attract other commercial enterprises.

Nearby housing can only help those companies in their recruiting efforts. Says the Presidio Trust's Erica Southworth, the housing "is certainly an advantage for organizations hoping to locate on the Presidio."

OUTTAKES

Stan Bunger and Jan Boyd

GOING FOR GOLD: The Salt Lake City Winter Olympics are still three years away, but for a San Francisco software startup, the worrying already is under way.

Cubus Corp. has landed a contract to provide project-collaboration software to the Boyer Group, a developer. Boyer's $500 million Olympics-related Gateway Project involves seven square blocks of Olympic facilities (dormitories, restaurants, theaters) in Salt Lake City.

The Boyer Group is managing the work of 10 architecture, engineering and construction companies. It's a recipe for confusion. If an architect re-draws plans for a walkway, for instance, the new blueprint has to be passed around for comment and approval, and communications breakdowns can easily occur.

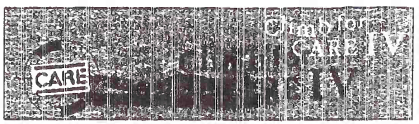
Original plans called for setting up a 9,000-square foot office in Salt Lake City and requiring each company involved in the project to have people available for collaboration meetings there six hours a day.

That $1.5 million plan has been shelved. Instead, contractors log in for about two hours a day from their own offices, using Cubus' Reviewlt software. The Web-based software lets users post new plans, review and comment on other postings.

For Cubus, it's a major real-world test of software that was only released three months ago. It may not be the equivalent of winning the Olympic downhill, but if this stuff works, Cubus could find itself on the fast track.

BIRDBRAIN GETS WINGS: Positive news to start out the new year. Looks like we've got what they call in Silicon Valley a "category killer." A few weeks ago, we told you about Birdbrain Technology, the two-man Lafayette company responsible for developing Polly Professor in the hours not spent at their "real" jobs as consultants for KPMG. Polly Professor is a software program that teaches your pet bird to speak, and can be programmed to keep your bird company while you're away.

Well, it looks like Polly Professor is a hit. Petco, the big daddy of the pet industry, has just decided to stock the product, as have a number of other pet stores, and it looks like people are buying. Next step? May-



be moving the office out of founder Howard Bishop's East Bay garage.

CARE CLIMB: Roseanne Siino, Netscape's vice president for corporate communications is on her way up ... Mount Kilimanjaro. Later this month, Siino and co-worker Kate Gerwe plan to take on the world's second-tallest mountain for charity. They are participating in the fourth annual Climb for CARE, a trek to the 19,500 foot summit of Kilimanjaro to raise both money and awareness for the nonprofit.

In addition to the climb, the two will spend time in Zanzibar and Tanzania visiting CARE projects, including a village that is struggling to find a balance between the needs of its people and the land of a new, nearby preserve.

Siino says she was attracted by both the organization and the personal challenge. "It's so easy to get wrapped up in high tech – and conversations about where everyone is buying a house – yet people in the rest of the world just need to worry about survival. And this is more than just writing a check."

Siino and Gerwe have managed to raise $60,000 in just a few weeks. All of the cash goes directly to CARE projects. If you're interested in helping, e-mail Siino at Roseanne@netscape.com.

Outtakes is a biweekly column that takes you behind the scenes of New Media News, which appears Sundays at 9:30 a.m. on KRON-TV and twice daily at 6:30 a.m. and 6 p.m. on BayTV. Stan Bunger reports for the show; Jan Boyd is the producer.

Al Gore Must Wait Before Registering Domain Names

▶ SWARTZ
From Page B1

securing them before they were snapped up by political foes. He is offering them to the Democratic Party.

Unfortunately, there are scores of "cyber-squatters" whose motives ... working as fast as possible to rebuild the server. Please stand by for more updates."

If your memory needs refreshing, Arbigger.net is the San José operation that promised lifetime Internet access for $60. That was two years ...



Jon Swartz

Bruised Intel's Strategy — Faster, Cheaper, Sooner

▶ CHIPS
From Page B1

Semiconductor's Cyrix unit established the popularity of PCs that sell for less than $1,000.

Intel Chairman Andy Grove has acknowledged that the company missed a significant market shift to sub-$1,000 PCs. The challenge for Intel is how to compete at the low end of the market while still selling ... name, said Mike Sullivan, an Intel spokesman. "We need to build consumer awareness and consumer preference, in addition to making it even faster and more affordable."

Still, according to Mercury Research, an Arizona firm that tracks the semiconductor industry, AMD has eroded some of Intel's strength. In the third quarter, Intel's share of the sub-$1,000 PC market dropped from 68 percent to 56 percent, while ... School in Raleigh, N.C., said a person close to AMD gave him the Sharptooth chip, which he doesn't expect to hit shelves until February.

AMD will say only that Sharptooth will be out in the first quarter of this year. The chip, which Shimpi anticipates will be called the K6-3, "is very promising," he said. "It doesn't look like there's any downside to the K6-3."

Fellow ... Mercury Research, said

FROM : ANTENNA GROUP PHONE NO. : 415 896 1094 Jan. 08 1999 05:26PM P2

188 - 1520 MAGAZINE
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New York, NY

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JANUARY 5, 1999

Bacon's

3785-A

Internet BEST of 1998

Microsoft Outlook Express

Sending and receiving e-mail is still the most popular activity on the Web, and using Microsoft Outlook Express (OE) to do it will make your messaging productive and enjoyable. Its intuitive interface, ability to handle multiple accounts, comprehensive address book, and easy HTML functionality make it a great choice for consumers.



Bundled with Internet Explorer 4.0, OE supports all the relevant Internet standards: POP3 and IMAP4 for mail, LDAP for public address lookups, S/MIME for security, and more.

Microsoft Corp., Redmond, WA; 425-882-8080; www.microsoft.com/ie/ie40/oe (ORS 519).

Netscape Communications Corp., Mountain View, CA; 650-937-2600; www.netscape.com (ORS 537).

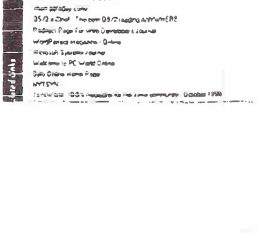
ICQ

ICQ ("I Seek You") has come from seemingly nowhere to become one of the most widely used applications on the Net. In addition, its popularity has spawned a new category—instant messaging—that is growing in popularity as both a social and a business tool. What makes ICQ stand out is its abundance of features. Beyond real-time chatting, ICQ supports file and URL transfer, off-line message composition, e-mail notification, message forwarding, multiuser chat, and contact lists, as well as offering excellent visual graphical tools or a raw HTML editor without affecting the output. You can embed Java applets, ActiveX controls and Netscape plug-ins, and JavaScript event handlers. DHTML code generation—for both Microsoft and Netscape browsers—is automatic.

Macromedia Inc., San Francisco; 415-252-2000; www.macromedia.com (ORS 520).

Alexa

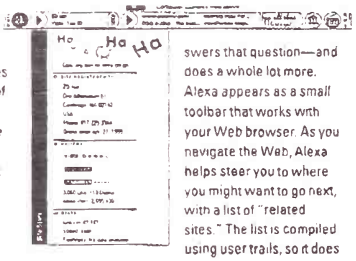
Have you ever been surfing the Web and wondered where to go next? Alexa Internet is the browser utility of the year because it an-



Netscape Communicator 4.5
In the game of one-upmanship that the browser battles have become, Netscape unleashed the last volley of 1998 with the release of Communicator 4.5. While Netscape may not remain in the lead for long, since Microsoft has released a beta version of Internet Explorer 5.0, for most of 1998 Communicator was the one to watch—thanks to its innovative Smart Browsing concept, among other new features. The Smart Browsing features rely on Netscape Netcenter's search index and are a key part of the company's plans to promote the site as a portal along the lines of Yahoo! and Excite. Communicator's e-mail client, Messenger, has gotten a much-needed overhaul.

On their own none of these enhancements are really revolutionary, but together they add up to a browser that is easier to use and more functional, giving Netscape Communicator 4.5 the edge, at least for now.

alerts and lots of configuration options. No program enables a better sense of community.
America Online Inc., Dulles, VA; +972-3-6488090; www.icq.com (ORS 538)



Macromedia Dreamweaver 1.2
Microsoft Notepad still reigns as the most popular Web authoring tool for many Web professionals, because too many visual tools wreak havoc with HTML code. But as more developers get a look at Macromedia Dreamweaver ($200 street), which lets you build visually appealing, cutting-edge Web pages without tampering with the purity of the code, Notepad's Web authoring days may be numbered.

Dreamweaver's excellent "Roundtrip HTML" editing lets you create Web pages using either

swers that question—and does a whole lot more. Alexa appears as a small toolbar that works with your Web browser. As you navigate the Web, Alexa helps steer you to where you might want to go next, with a list of "related sites." The list is compiled using user trails, so it does a decent job of guiding you to relevant information.

Alexa also gives you information about the site you're browsing. You can find the site's owner and address, see what other users and third parties like *Yahoo! Internet Life* think of the site, and check traffic and freshness estimates.
Alexa Internet, San Francisco, 415-561-6900; www.alexa.com (ORS 539)

Netscape Enterprise Server Standard Edition 3.5.1
More than just software for deliv-

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BEST of 1998

ering Web pages. Web servers are also application platforms. Nowhere is that more evident than in the power of Netscape Enterprise Server Standard Edition 3.51 ($1,295 list), which combines innovative features with strong performance and wide availability.

Most notable are its content management features, which give you excellent tools for intranet environments. Netscape Enterprise also offers more power for Web development, with its support for its own application programming interface, NSAPI, as well as CGI and Java Servlets. And Netscape Enterprise runs on Windows NT, NetWare, and five flavors of Unix.

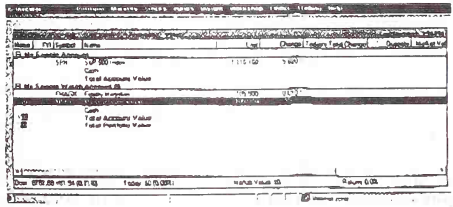
Netscape Communications Corp., Mountain View, CA; 650-937-2600; www.netscape.com (ORS 537).

Northern Light

Armed with a set of advanced search features to enhance its custom-search result folders and extensive Special Collection, Northern Light caters to the power searcher. It has an uncanny ability to turn up relevant hits. The basic search offers support for Boolean syntax, nested queries, wildcards, and truncation, while the advanced search makes it possible to limit by date, language, or domain. Hits are dynamically grouped into custom folders based on subject, document type, source, and language. Northern Light also continues to shine as a fee-based database service, offering full-text Special Collection articles from more than 4,500 periodicals, scholarly journals, and newswires.

Northern Light Technology LLC, Cambridge, MA; www.northernlight.com (ORS 540).





Excite

The best Web portals are not just starting points for your Web search, they're destinations in and of themselves. With its excellent personalization tools, anticipatory search ability, sense of community, and superior navigational framework, Excite best delivers on the dual promise of search and content. We especially liked the ability to create a customized Excite page with local weather, movie, TV, and sports information simply by entering our ZIP code and e-mail address. We also found that no other portal offered as many options for adding to a personal page. Excite lets you select stocks to track, create multiple portfolios, find local events, and place content (such as the news that interests you and personal reminders) on your home page. In the search arena, Excite anticipates what you want on common queries for subjects like sports teams and company information, steering you to relevant information more quickly. The lively chat and message boards are bolstered by great software to improve your experience, and the navigation rarely left us at a dead end even deep into the site. Excite Communities offers shared spaces for users with common interests. • *Excite Inc.*, Redwood City, CA; www.excite.com (ORS 536).

Microsoft Investor

With the stock market behaving like a game of Chutes and Ladders, the Web has become a popular destination for market mavens. If you want to keep your own portfolio, double-check your broker's advice, or do your own homework, check out Microsoft Investor, which puts all the relevant information at your fingertips for $9.95 a month ($6.95 for MSN members).

What separates Investor from the many other investment sites out there on the Web is its software. Nowhere will you find a more impressive Portfolio Manager. Some of the research content, such as analyst earnings estimates, are subscription-based, but you'll find plenty here even for free. Microsoft has recently created a more comprehensive personal-finance site called Money Central, of which Investor is a part.

Microsoft Corp., Redmond, WA; investor.msn.com (ORS 519).

Amazon.com

Amazon.com was among the first e-commerce sites, and in this year of e-commerce going mainstream, it's still the best. Even though the competition is biting at its heels, Amazon remains in front because of its healthy discounts, large inventory, notification service, one-click shopping, and recommendations. What Amazon does best, though, is make you feel that you're part of a community.

Amazon's site design is also top-notch. Its search engine intelligently returns top matches and full results that help you quickly find your target title. With Amazon now selling music—and video sales on the way—you may soon be using Amazon.com for all your entertainment needs.

Amazon.com Inc., Seattle; www.amazon.com (ORS 541).

BEST of Support & Satisfaction

In the past year or so, Microsoft has made up a lot of ground in Internet software with Internet Explorer 4.0 and two messaging clients, Outlook and Outlook Express. But readers still most recommend the competition.

- Netscape Navigator (all versions)
- Eudora (all versions)

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IL-D200 DAILY NEWSPAPER
DAILY SOUTHTOWN
Tinley Park, IL

Circ-(M) 53,053 (S) 61,370

JANUARY 5, 1999



Bacon's

3985-A

eBlast Net guide gets you thinking

By Kitty Williams
Hope Springs Press

If you're one of those who think you can't teach an old dog new tricks, Encyclopedia Britannica's eBlast will make you think again.

Go to eBlast's Web site and suddenly you're the one responding to the commands: sit, seek; fetch; retrieve.

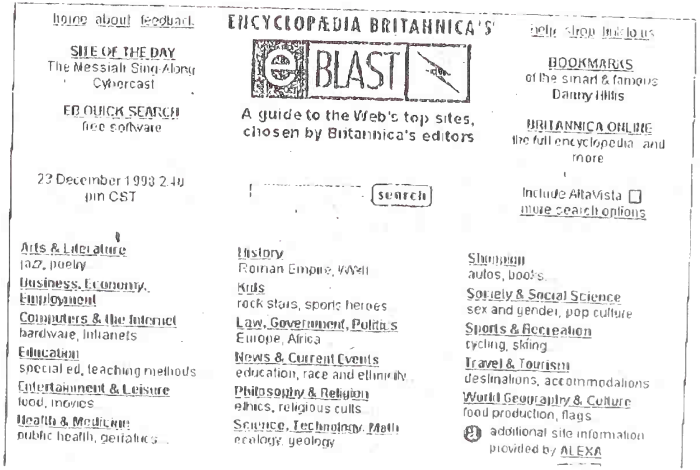
Not only that: You're having fun doing it.

WEB SITINGS

eBlast is the 230-year-old Encyclopedia's Internet guide and it's a great tool for both new and experienced users. It describes itself as a "World Wide Web navigation service that classifies, rates, and reviews more than 125,000 Web sites."

Subtitled "The Thinking Person's Guide to the Web," it also has regular features including Bookmarks of the Smart and Famous, Web Wonders and New to the Net. This old dog has had a major upgrade since it first woofed online in 1994.

Now 125,000 Web sites may sound like a



FROM : ANTENNA GROUP
PHONE NO. : 415 896 1094
Jan. 22 1999 04:13PM P5

FROM : ANTENNA GROUP PHONE NO. : 415 896 1091 Jan. 22 1999 04:14PM P6

percentage of us will realize that there are millions of sites out there, but don't scoff. Though the numbers of home pages may be approaching that of the grains of sand on your favorite beach, most of them are of little interest to the average Internet user.

In fact, the vast majority of them are essentially useless. Or worse. They clog up search engines and make it difficult to find the sites you might be looking for. Frequently their addresses show up in search results, but linkrot has made them unreachable. It can be frustrating for even the most experienced surfer.

On top of that, sometimes when you've found a few sites you like and trust, you are tempted to stop looking for new and interesting additions. You can miss a lot that way.

eBlast helps overcome some of that frustration, and it also keeps a window open to worthwhile or innovative new sites.

A businessperson using the site might click the Internet directory heading Business, Economy, Employment. On the first level, he or she will find valuable general business sites including Business Week Online, Dow Jones Business Directory, and the EDGAR Database of Corporate Information. There's also a choice of 19 business subcategories including news, law, history, education, leaders, management, consumer issues, electronic commerce, marketing, nonprofit organizations, personal finance, and taxes. Each category has a list of useful links, and often further subcategories. It really is useful.

If you liked her original Hyperwacky column, you'll be delighted to know that Lisa Napoli, the New York Times Cybertimes columnist, now writes a similar monthly column for newcomers to the Net at eBlast. She also provides a list of definitions to help untangle Web jargon.

Bookmarks of the Smart and Famous spotlights the Web surfing habits of "celebrities" such as Click & Clack the public radio car experts, Yale professor and Renaissance man David Gelernter, and author/attorney Scott Turow.

You'll discover that, among other things, Slate editor Michael Kinsley searches the Bible in the King James version and reads the Drudge Report; Click & Clack like their own Web site best; and Word editor Marisa Bowe consults the New York Times, the Wall Street Journal and the Tarot online; Gelernter surfs Shakespeare, the Louvre and the Met museums, and buys used books online.

This offers both insight into the habits of these great brains and a neat way to learn about Web sites that working people actually use — and you might, too. I've picked up a bundle of useful addresses here.

The sites of the day and sites of the week picked by the eBlast editors are archived back to July 14, 1998. They are amazing, often offbeat, and always worth at least a brief visit.

Guest columns have examined topics such as how the digital revolution has changed the way cities work in "Download a Life!" and how older Americans are using the Internet in "Seniors Rock the Web."

But what will keep many people returning to eBlast is the Internet directory, which reviews and ranks Web sites in 140 different categories, from one to five stars. eBlast itself deserves a nice handful of gold stars, to borrow from its own rating system. This looks to be one frisky puppy.

Feedback is welcome. E-mail catbird@webpointers.com.

WHERE TO FIND IT

To visit the sites mentioned in this column, type the Web address listed below into your browser's entry line or go directly to http://www.webpointers.com where WebPointers columns are archived with active hyperlinks.

ADDRESS BOOK
eBlast (http://www.eblast.com/)

Article View

Article 6 of 36
BUSINESS
OUTTAKES
Presidio Offering Solution to Your Daily Commute
STAN BUNGER, JAN BOYD

01/04/99
The San Francisco Chronicle
FINAL
Page B3
(Copyright 1999)

A story in the Business section on Monday incorrectly stated that Mount Kilimanjaro is the world's second-tallest mountain. It is the highest peak in Africa. (01/07/99, P. A2).

Thousands of Bay Area high-tech workers creep and crawl to work every morning, stuck in the traffic jams that seem to get worse each week.

But that scene is only a bad memory for a number of staffers at **Alexa Internet** , a San Francisco maker of software that helps Web surfers find similar sites. The company's offices are at the Main Post area of the Presidio, and eight of the company's 34 employees live on the Presidio grounds. They pay what's considered "market rate" rent (nobody would say what they were paying), but they get an easy commute and can't-be-beat surroundings.

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Alexa 's marketing chief, Cynthia Lohr, lives in what she describes as a "modest 2 1/2-bedroom" unit that once housed a colonel's family. Lohr, who lived in Berkeley for 10 years and describes herself as "an East Bay-er at heart," says she jumped at what she calls a "once-in- a-lifetime opportunity" to erase her commute and live on the Presidio.

If the Presidio Trust has its way, there will be many more companies like **Alexa** with a significant number of Presidio residents. With more than 1.2 million square feet of nonresidential space currently leased or available for lease, Presidio managers hope to attract other commercial enterprises.

Nearby housing can only help those companies in their recruiting efforts. Says the Presidio Trust's Erica Southworth, the housing "is certainly an advantage for organizations hoping to locate on the Presidio."

GOING FOR GOLD: The Salt Lake City Winter Olympics are still three years away, but for a San Francisco software startup, the worrying already is under way.

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The Boyer Group is managing the work of 10 architecture, engineering and construction companies. It's a recipe for confusion. If an architect re-draws plans for a walkway, for instance, the new blueprint has to be passed around for comment and approval, and communications breakdowns can easily occur.

Original plans called for setting up a 3,000-square-foot office in Salt Lake City and requiring each company involved in the project to have people available for collaboration meetings there six hours a day.

That $1.5 million plan has been shelved. Instead, contractors log in for about two hours a day from their own offices, using Cubus' ReviewIt software. The Web-based software lets users post new plans, review and comment on other postings.

For Cubus, it's a major real-world test of software that was only released three months ago. It may not be the

Article View

Article 6 of 36
BUSINESS
OUTTAKES
Presidio Offering Solution to Your Daily Commute
STAN BUNGER, JAN BOYD

01/04/99
The San Francisco Chronicle
FINAL
Page B3
(Copyright 1999)

A story in the Business section on Monday incorrectly stated that Mount Kilimanjaro is the world's second-tallest mountain. It is the highest peak in Africa. (01/07/99, P. A2).

Thousands of Bay Area high-tech workers creep and crawl to work every morning, stuck in the traffic jams that seem to get worse each week.

But that scene is only a bad memory for a number of staffers at **Alexa Internet** , a San Francisco maker of software that helps Web surfers find similar sites. The company's offices are at the Main Post area of the Presidio, and eight of the company's 34 employees live on the Presidio grounds. They pay what's considered "market rate" rent (nobody would say what they were paying), but they get an easy commute and can't-be-beat surroundings.

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equivalent of winning the Olympic downhill, but if this stuff works, Cubus could find itself on the fast track.

BIRDBRAIN GETS WINGS: Positive news to start out the new year: Looks like we've got what they call in Silicon Valley a "category killer." A few weeks ago, we told you about Birdbrain Technology, the two-man Lafayette company responsible for developing Polly Professor in the hours not spent at their "real" jobs as consultants for KPMG. Polly Professor is a software program that teaches your pet bird to speak, and can be programmed to keep your bird company while you're away.

Well, it looks like Polly Professor is a hit. Petco, the big daddy of the pet industry, has just decided to stock the product, as have a number of other pet stores, and it looks like people are buying. Next step? Maybe moving the office out of founder Howard Bishop's East Bay garage.

CARE CLIMB: Roseanne Siino, Netscape's vice president for corporate communications is on her way up . . . Mount Kilimanjaro. Later this month, Siino and co-worker Kate Gerwe plan to take on the world's second-tallest mountain for charity. They are participating in the fourth annual Climb for CARE, a trek to the 19,500 foot summit of Kilimanjaro to raise both money and awareness for the nonprofit.

In addition to the climb, the two will spend time in Zanzibar and Tanzania visiting CARE projects, including a village that is struggling to find a balance between the needs of its people and the land of a new, nearby preserve.

Siino says she was attracted by both the organization and the personal challenge. "It's so easy to get wrapped up in high tech -- and conversations about where everyone is buying a house -- yet people in the rest of the world just need to worry about survival. And this is more than just writing a check."

Siino and Gerwe have managed to raise $60,000 in just a few weeks. All of the cash goes directly to CARE projects. If you're interested in helping, e-mail Siino at Roseanne@netscape.com.

Outtakes is a biweekly column that takes you behind the scenes of New Media News, which appears Sundays at 9:30 a.m. on KRON-TV and twice daily at 6:30 a.m. and 6 p.m. on BayTV. Stan Bunger reports for the show; Jan Boyd is the producer.

PHOTO

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Bacon's

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SCIENCE & TECHNOLOGY

A mausoleum for Internet

Old Web sites never die, they just drift aimlessly in cyberspace. Steve Baldwin has given them a place to spend the afterlife.

By PATTI HARTIGAN
BOSTON GLOBE

Steve Baldwin didn't set out to be an online ghost-buster. It just sort of happened.

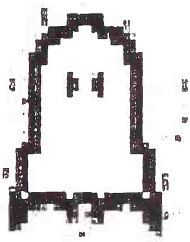
It began on a summer night in 1996. He was drifting in Long Island Sound on a pleasure craft. The captain and crew had fallen asleep, leaving Baldwin at the helm. Now, Baldwin is a Webmaster (as in World Wide Web), not a shipmaster. In other words, he didn't have a clue. What did he do?

"I had this sense of peril," he recalls, "and all of a sudden, I started thinking about the Internet." Of course.

"I was working at Pathfinder [Time Warner's erstwhile pioneering Web site] at the time, and I suddenly realized that everything we were creating is immortal. It all crystallized for me: Web sites are like ghost ships, like the Flying Dutchman. Unless you keep a crew on board, they'll drift like haunted phantoms in the night."

Metaphorical musings aside, Baldwin had a slightly more pressing problem in the real world. He was steering straight for a jetty.

As the story goes, the captain woke up just in time to put the ship back on course. Baldwin got off the boat, retired his deck shoes, and proceeded to set up Ghost Sites, a Web page that offers a whimsical chronicle of abandoned Web sites gathering cobwebs in cyberspace.



It's a sort of online mausoleum, with witty commentary about sites that continue to broadcast the "latest" news from, say, two or three years ago. Baldwin seeks out mothballed pages and rates them with a little ghost system (three ghosts for a site that is "dead, but well-preserved", five for a site that is "stuffed, embalmed and ready for an Internet museum.")

A few examples: The "official" site hawking Woodstock '94, featuring pages counting down to the day of the event, posted in the infancy of the Web, they are quaint displays of simple text and images that give you the same feeling you get when reading an essay you wrote in grade school.

Then there's the site commemorating the death of Jerry Garcia, offering the "latest" photos of tie-dyed mourners. One site connects you to breaking news on the Blizzard of '96; another celebrates the 100th running of the Boston Marathon — too bad it happened two years ago.

This is amusing stuff for online archaeologists, but these specters represent a deeper problem. What happens to a site after the novelty wears off and the creator just lets it slide (or forgets the password required to update the content)? The answer is: nothing. Such sites drift aimlessly. And they can be annoying obstacles for folks who use the Internet for research, slowing users down when ghost sites haunt search results.

By nature, the Internet is decentralized, without an official archivist or librarian. That's part of its chaotic beauty — and a source of its frustration.

"This isn't the Dewey Decimal System; it's a very imprecise way of finding information," Baldwin says. The best way to avoid surfing ghost sites — albeit an imperfect solution — is to use the advanced options available on some search engines.

One search engine has even made dead sites part of its national advertising campaign: The television spots for Hotbot.com feature a bunch of old cronies offering investment tips. "I've got a hot one," a gray-haired suit advises. "Asbestos. It's a new miracle fiber." You get the point.

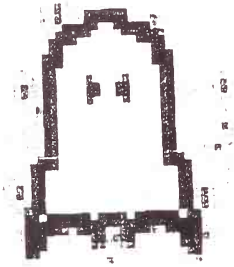
Andrew DeVries, director of marketing and communications for Wired Digital, Hotbot's parent company, says the ads aim to stress the fact that the search engine updates its database every three to four weeks to weed out

ghosts

"dead links" that lead users to a "Document Not Found" message. It doesn't do anything about the ghosts, though.

"Those sites show you the triteness from the beginning of the Web, when everybody went out and created a site and then realized it's actually a lot of work to maintain them," DeVries says. "You end up with all these little islands in cyberspace that no one has any interest in."

Baldwin stalks those islands to get a good laugh, but he's also a strong proponent of a serious project to archive the Internet — phantoms and all — for historical



purposes. Founded in San Francisco by a pioneer named Brewster Kahle, the Internet Archive — www.archive.org — aims to preserve the ever-changing world of cyberspace. It has already documented sites from the 1996 presidential election in an archive housed at the Smithsonian Institution.

As for Ghost Sites, it's had a rather spotty life itself since the idea was spawned that fateful night at sea. Baldwin let it fossilize for about six months last year, but now it's up and running again at a cool Web 'zine called Disobey.com.

"It's an almost unpardonable sin," Baldwin concedes about the period when he let Ghost Sites become, well, a ghost site.

As for the reluctant sailor himself, he's no longer working at Pathfinder, one of the first publishing experiments on the Web that has lost its early promise. Instead, Baldwin is free-lancing these days. His primary gig? He's a ghost writer for Time Digital.

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Bacon's

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Free Internet service con

SHAREWARE | Bill Dubie and Dave Sciuto

Seasoned and curmudgeonly scribes that we are, we were suspicious of any Internet service purporting to be absolutely free. After all, several ventures using that same premise have folded, so we cautiously checked out NetZero, an ad-driven Internet service.

Following a commercial TV or radio model, NetZero provides Internet access free of charge, deriving support from advertisers. NetZero places an almost unnoticeable banner with cycling advertisements on your desktop. To its credit, NetZero's Web site has a humorous approach to its service, effacing its limited phone support and reminding you that it's free.

Although we succeeded in accessing the service about 75 percent of the time, and it's snail-pacedly slow, we used FTP to transfer files and accessed America Online through a TCP—IP connection.

NetZero supports 56K FLEX and V90 modems. And, its dial-in numbers are increasing constantly, so chances are good that you'll have at least one local point-of-presence to use.

For those without 'Net access, a CD is available; ironically, you order it online, so you need access to a connected PC in a library or a cybercafe.

We wouldn't use NetZero as our primary ISP — yet — but it's our desktops as a back-up for the ever-fickle Internet world. The concept is certainly attractive, and we're never ones to pass up anything that we can afford.

Price: Free.

Where to find it: www.netzero.com.

System requirements: A PC running Windows 95 or 98 and an Internet connection.

Frequently viewed sites always on hand

Talk about using every last pixel of screen real estate. MySpace is a task-control bar that sits in the overscan area (i.e., the little black stripe) at the bottom of your screen, providing "cartridges" of information that you access with your browser. If your video card doesn't support the overscan area, MySpace will situate itself below

ıes in handy as backup

your taskbar.

The beauty of MySpace is that information on frequently viewed sites is always at hand, the program comes configured with cartridges such as Finance (stock market, NASDAQ, News, Desktop Ticker), Entertainment (primarily Disney sites), MySpace online (Great Sites, Search, Chat, etc.), as well as desktop utility cartridges and spaces you can configure. Each cartridge contains several levels, so don't be misled by the initial presentation of selections.

MySpace can also be set up as a rotating bar in your screen saver. Tickers for InfoSpace and the stock market can scroll across your screen vista, while you busily work or surf, undisturbed by the bar.

Though the competition for the bottom lines of the screen can be crowded with Alexa, PointCast, and your own Windows taskbar (which you can relocate), MySpace deserves a look-see, especially where space is at a premium.

Price: Free

Where to find it: http://www.thepixelcompany.com/myspace/product/index.html

System requirements: A PC running Windows 95 or 98 and an Internet connection; VGA monitor; 3MB of free disk space; 20MB RAM (Win95), 24MBRAM (Win98)

Bill Dubie and Dave Sciuto co-host "The Computer Report" on WCAP AM-980 inLowell on Sundays at 7:00-am. Hear the show on RealAudio through the Web site http://theReport.com. Contact them at billdave@inr.net

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Bacon's

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Searching on a sea of Web pages

Specialized sites evolve to better help surfers find bearings

By Marc Saltzman
Special for USA TODAY

If, as U2 sang, you "still haven't found what you're looking for," you're not alone in cyberspace.

In less than five years, there are already more than 300 million Web pages on the Internet, with new pages being created at a rate of one every three seconds. It's virtually impossible for a lone surfer to keep up.

Fortunately, dozens of search sites and directories are designed to help. Most include search "engines" (also known as "spiders" or "crawlers"), which scour the Web to find matches based on keywords you type in.

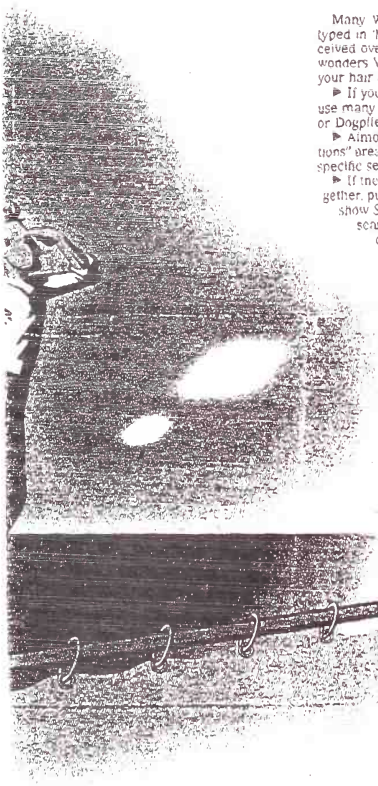
Because of the Web's staggering growth, search sites have become indispensable for both novices and veterans. In fact, according to research firm Media Metrix, eight of the 10 most-visited Web properties are, or include, search engines.

One trend that has received a lot of attention is the reinvention of many search sites into "Web portals," with added features such as news, local



tra WEDNESDAY: LIFE WITH TECHNOLOGY
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How to narrow searches



Many Web users have had experiences like Dave Vlaene. "I typed in 'hockey equipment' in the Excite search engine and received over 1 million Web pages — where on earth do I begin?" wonders Vlaene, a college student in New York. Before you pull your hair out, try these tips for more efficient searching.

- If you're short on time, try any of the "metasearch" sites that use many search engines at once, such as MetaCrawler, Mamma or Dogpile. (See story below.)
- Almost all search engines have an "advanced search" or "options" area; taking a few minutes to read the instructions on more specific searches can save you time in the long run.
- If there is a certain sequence of words you want to search together, put the phrase in quotation marks. An example is the TV show *Saturday Night Live*. Without quotations on each end, a search engine like Excite or AltaVista will return every site containing any of those words.
- If broad categories yield too many results (such as "car classifieds"), be more specific to find what you want ("Corvette classifieds").
- If your keywords do not yield the results you're after, try synonyms. If you can't think of another word for the same thing, use the free on-line Roget's Thesaurus (www.thesaurus.com) or Merriam-Webster OnLine (www.m-w.com).
- In most search engines you can put a plus sign (+) in front of a word that must be included in all results. An example is city guides +Seattle. Similarly, put a minus sign (-) in front of a word that should not appear in the results (python-Monty) if you're only interested in snakes or the programming language and not the British comedy troupe.

By Marc Saltzman

more than 100 million documents) with comprehensive reviews.

Even more than Yahoo! or Lycos, Snap aims to provide a thorough description of what the

Excite has recently instituted a "channelized search" function built right into the search technology. According to Kris Carpenter, director of search services at Excite, "consumers were frustrated with standard search practices and many just wanted answers — and not URLs" (URL stands for Uniform Resource Locator, a technical term for a Web site's address.) If a user types in a city, Excite will provide weather, map and tourist information. Type in the name of a publicly traded company to get stock quotes, type the name of a sports team for scores, schedules, rosters, and so on.

on-line pagers. The goal: to get surfers to visit every time they log on, not just for searches.

But a potentially even more useful development is the emergence of "metasearch" sites such as MetaCrawler and Mamma ("the Mother of all Search Engines"), which consolidate several search engines under one roof, saving users the trouble of visiting multiple sites and sifting through thousands of listings.

"I don't have to jump from search engine to search engine anymore. I just go to Dogpile," says Stuart MacDonald, 31, an investment counselor for a bank in Los Angeles. "I always seem to find what I'm looking for — it's actually my start-up page now."

Other search services are becoming specialized. Need a recipe? Looking for your high school sweetheart? Hundreds of specialized sites search specifically within your subject area.

On top of all this, both Microsoft and Netscape have more robust search capabilities embedded in their respective browser programs.

While the future of the Netscape browser as we know it is up in the air after its acquisition by America Online, Netscape announced in April it would add its own search engine to the growing Netcenter search site (www.netcenter.com). Netscape is licensing its search engine from Excite, but provides other options from the main page too, including Lycos, Infoseek, AltaVista and LookSmart. By March, Netscape plans to launch the Open Directory (acquired from Newhoo, directory.mozilla.org), allowing volunteers to help organize and contribute Web site write-ups.

Netscape also has partnered with Alexa (www.alexa.com), a handy tool that acts as a navigation companion as you travel the Web, suggesting related sites based on your interests.

Microsoft's Internet Explorer 5.0, now in the beta-testing stage, offers a streamlined interface that lets users select a type of search, then assigns the best-suited set of engines from a customizable list. A search for a person will likely lead the user to WhoWhere, while a Web page inquiry may tap into AltaVista.

Not all search services work the same way, nor do they possess the same features. Here's a look at some of the more popular sites:

AltaVista
www.altavista.com

In terms of pages indexed, AltaVista is the largest search engine on the Web, covering a whopping 150 million Web pages in its database. Launched by Digital in 1995 and later acquired by Compaq, AltaVista has been a longtime favorite for savvy researchers looking to find material on both the Web and in on-line discussion newsgroups. The engine displays 10 "hits" per screen, ranked by relevance to your keywords; each site has a brief description and the date it was last modified.

In 1998, AltaVista formed a relationship with Web directory LookSmart and a partnership with Ask Jeeves, a site that lets searchers type in their queries in conversational form. Another attraction of AltaVista is a language translation service. Users can paste text or the address from a foreign Web site into a window on AltaVista, and with the click of a mouse, it will be translated. It's not always perfect, but it's surprisingly close. AltaVista allows surfers to search the Web in 25 different languages as well.

Other features offered by AltaVista include a photo finder (offering thumbnails and info for each of the images), a video search function and an optional "Family Filter" service that limits search results to sites suitable for children.

Yahoo!
www.yahoo.com

It may be the oldest, best-known and most visited search site on the Internet, but many surfers are probably unaware that Yahoo! is primarily a Web directory rather than a true search engine. That is, it is based on user submissions, so it may not list sites that a crawler might find. To compensate, it also uses a powerful search engine to scour the Net with spider software created by Inktomi (www.inktomi.com). Still, Yahoo! has more than 1 million sites, organized into 14 main categories, such as Arts & Humanities or Recreation & Sports.

Yahoo! also pioneered the trend among search companies to become one-stop information and recreation hubs, or "portals." Some of the many free services and channels provided include multiplayer gaming, yellow pages, maps, classified ads, e-mail accounts, on-line pagers, shopping and stock quotes. Yahoo! also offers Yahooligans! (www.yahooligans.com), a kid-safe search engine de-

Broad reach, sharp focus mean n

One of the best searching tools on the Web is MetaCrawler (www.metacrawler.com), which simultaneously does parallel queries of nine databases including Yahoo!, AltaVista, Excite, Infoseek and Lycos. Then, it equalizes the scoring and eliminates duplicates.

"We continuously evaluate who we're partnered with so we can provide visitors with the fastest and most efficient searching tool available," says Russell Horowitz, CEO and co-founder of Go2Net, which bought MetaCrawler two years ago. Web directories LookSmart (www.looksmart.com) and The Mining Co. (www.miningco.com) have been added to complement the search engines.

Other similar metasearch sites include **Mamma** (www.mamma.com), **Dogpile** (www.dogpile.com), **All-In-One Search Page** (www.albany.net/allinone), **MetaFind** (www.metafind.com), **Inference Find** (www.infind.com), **OneSeek** (www.oneseek.com), **SavvySearch** (www.savvysearch.com), and **FindIt** (www.itools.com/find-it).

Specialized search engines also have sprung up for specific fields of interest. A good place to start is S (searchenginewatch.co specialty engines inclu archives of discussion etc.) and e-mail discuss Listz, etc.), plus help w ping and looking for ne

Some, such as Scour and Arriba Vista (w strictly search for audi

Another site worth Jeeves (www.ask.com that answers questions

By Sam Ward, USA TODAY

signed for young surfers.

Lycos
www.lycos.com

Playing on the Web metaphor, Lycos is taken from the Latin word for "wolf spider." It's grown considerably in the past year as both a search engine (more than 50 million Web pages in its database or 83 million including the individual searches for pictures, sounds, recipes, etc.) and a Web directory, by acquiring a number of specialized services.

These include WhoWhere (people searches), the on-line community site Tripod, free Web page site AngelFire, and WiseWire, a technology that powers Lycos' useful Web guides. Lycos also will acquire HotBot, another popular search engine, by March.

Lycos also features a categorized "Top 5% Best of the Web" area for sites rated by content and design, and an area for users to search exclusively for pictures and sounds.

Snap
www.snap.com

Chances are, you've witnessed some pretty aggressive TV and billboard advertising to promote this joint venture between CNet and NBC. In less than a year, Snap has risen to the 19th most visited site among home users, even eclipsing CNet's own slightly older Search.com (www.search.com), according to Media Metrix. Snap's clean layout combines the exhaustive Web crawling technology of Inktomi (covering

[illegible] decide if it's worth visiting. For example, if you type "Lara Croft" (the heroine of the Tomb Raider video game series), Snap will offer mini reviews for the most visited areas for that topic.

Infoseek
www.infoseek.com

Infoseek also is quite large (roughly 50 million Web pages) and reputedly accurate. It returned more relevant documents than any other engine on the Net in a test performed by CNet reviewers early in 1998. The same study found that seven out of 10 hits listed by Infoseek were on target, and it provided the fewest broken links (about three for every 100 found pages) and virtually no duplicates. Infoseek also has established a relationship with Disney's new GO Network to deliver handpicked content in the form of another "best of the Net" recommendations feature. Also available is "Infoseek Desktop," which adds a convenient button to the desktop taskbar to search the Internet from whatever application the user is working in. (AltaVista has a similar feature called "Discovery.")

Excite
www.excite.com

Excite contains about 80 million pages (roughly a third of AltaVista's 150 million), but many Web users may prefer Excite's layout, strong news page and free "portal" services including e-mail, chat areas and instant messaging.

Excite features a proprietary search tool known as "Intelligent Search." Not only will it look for typed-in keywords but also for ideas closely related to the words in your query (for example, "elderly people" and "senior citizens").

HotBot
www.hotbot.com

Launched in mid-1996, and soon to be acquired by Lycos, HotBot is Wired Digital's foray into the search engine market. It's a favorite of many surfers for ease of use and extremely robust search capabilities. HotBot indexes more than 110 million Web pages. HotBot is one of the more hip-looking sites and is fully customizable to search by date, language, multimedia, domain name, and much more. A new feature is the "Top 10 Most Visited Sites" button: When a user types in a query, HotBot will offer the most popular destinations for that category. This technology is licensed from Direct Hit (www.directhit.com). HotBot uses the Inktomi search technology and LookSmart for directory listings.

Northern Lights
www.northernlights.com

You may have not heard of this self-proclaimed "research engine," but it has now exceeded the 100 million Web page mark. Pages found are not only listed by rank and relevance but also by subject, type, source and language. For example, if a user types in "Bond," Northern Lights will break the word into custom search folders for "Stocks and Bonds," "James Bond Movies," "Bonds/Adhesives" and so forth. Another noteworthy feature is a Special Collection option, where users can pay a small fee ($1-$4 per document) to read or download full-text information gathered from trade journals, business periodicals and magazines.

Other well-known search sites include America Online's NetFind (www.aol.com/netfind), GoTo.com, MSN (www.msn.com) and WebCrawler (www.webcrawler.com).

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asked in plain English, without requiring keywords or complicated search strings. The program provides answers to literally millions of questions, "with content from credible and well-presented sources," says co-founder David Warthen.

Ask Jeeves also is a metacrawler, it will borrow from other search engines if the answer is not found in its own database.

If a user types in "What is on TV tonight?" Ask Jeeves will supply a pull-down list of dozens of stations in your time zone. Jeeves also answers such queries as "What is the population of X?" or "Who can I play Half-Life against?" Kids can ask "Why is the sky blue?" at Ask Jeeves For Kids (www.ajkids.com).

Danny Sullivan, editor at Search Engine Watch, believes specialty engines will be the wave of the future.

"As the Web grows, it's easy for people to be overwhelmed when using a general search engine," he says. "I think we're going to see the major search engines themselves develop more ways to deliver specialized results to users."







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Where Web Phantoms Roam

by by Ronald Warren Preutech

4:00 a.m. | 14 Jan 99 PST

You're at a place where there are no presidential impeachment hearings. Where Monica Lewinsky does not yet exist. Where Bill and Hillary Clinton are smiling and still building that bridge to the 21st Century.

You're looking at the official Web site for the 1996 Democratic National Convention, one of the many ghost sites that haunt cyberspace.

Like many of the other ghost sites he chronicles, webmaster Steve Baldwin says of the DNC site, "It's like everyone had left the building, and someone forgot to turn the lights off. There's no sense of closure."

Baldwin's caretaking began after a night in 1996 when he was left alone at the helm of a boat in the Long Island Sound. "I suddenly realized Web sites are like ghost ships. Without a crew on board, they'll drift like haunted phantoms in the night."

When he began the feature, Baldwin was a technology editor at Time-Warner's Pathfinder. He left Pathfinder to work at Ziff-Davis and let his site join the ghost fleet.

"If you really believe in the Web, does that oblige you to keep updating your homepage?" he asked himself. After becoming a freelancer, he decided to resurrect Ghost Sites.

Some of Baldwin's favorite ghost sites happen to be on Pathfinder. O. J. Central, a Unabomber page, and the mega site's coverage of the blizzard of 1996 are still up, and in some cases, readers who stumble on them are left hanging.

"They're still looking for the Unabomber at Pathfinder," Baldwin says.

When the Web soap opera The Spot was launched in 1995, it hit like a storm and soon had hundreds of imitators. It was intended to be the future of Web entertainment, but today it's like watching old reruns on Nickelodeon. Baldwin smiles. "It's so vacuous, so empty. I love it. I hope it never goes away."

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Where Web Phantoms Roam Page 2

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continued

Another classic ghost site takes you back to a more innocent time. A Day At Comdex '94 documents the computing industry right before the Internet hit mainstream.

"There were useless gadgets like 3-D eyewear," Baldwin remembers. "It was a bizarre industry. I go there when I get nostalgic."

Brewster Kahle, president of Alexa Internet and founder of the Internet Archive, says, "It's the modern literature, the cultural artifacts, of our time."

The Internet Archive takes Baldwin's idea one step further. So far, Kahle's team has collected over 12 terrabytes of data off the Internet and recently donated a complete snapshot to the Smithsonian of all the 1996 election sites, including official pages and spoof sites.

Kahle feels the early years of television were poorly documented, and he doesn't want the mistake repeated with the Internet. He believes that by documenting the past, we hold people accountable for the future. Quoting George Orwell, Kahle says: "'Those who control the past, control the present.'"

Baldwin also recalls Orwell. "Ghost sites are a good thing. If there were no remnant of the past, I'd be very frightened that Big Brother had taken over. That there is so much refuge is a healthy sign that this medium is still out of control."

Related Wired Links:

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Hot off the Wire: Search tools and portals seek more accurate results.(Internet /Web/Online Service Information)

01/01/99
Computer Shopper
Page 451(1)
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If you heard a tree fall in the forest, but couldn't find it, could you still call it firewood? As the Web has grown from a series of hyperlinked pages to a network of profit-seeking sites and information portals, users have access to more services to suit their business and personal needs than ever before. But beginning and advanced users alike face the same challenge as early Web pioneers: how to find the information they are seeking.

Lately, the big search engines have been making their mark through partnerships with book- stores and content sites, rather than with new algorithms and better logic. Meanwhile, every e-commerce software startup promises exposure to small businesses by submitting their newly formed cyber stores to all the already crowded search engines. Still other savvy marketers have made a business out of mastering the best way to tag their sites so that they'll appear at the top of the search-result lists with the aid of software such as WebPosition Gold. Add to that the fact that even advanced users have trouble remembering the idiosyncrasies of Boolean logic, and it's no small wonder that what's at the top of your latest search-result list isn't necessarily the best answer to your query--if it's an answer at all.

But innovation is far from dead. In fact, a host of companies has been working on technologies ranging from natural-language queries to collaborative filtering and metasearching--all fancy terms for more manageable surfing. And the portals are starting to listen. Both AltaVista and Netscape's Netcenter just added support for Ask Jeeves, a system that responds to plain-English questions. Since version 4.06, Communicator has included the What's Related button, which uses **Alexa Internet** 's popularity-based list of related links, and Bigfoot is adding this feature to its brilliant NeoPlanet custom **Internet** Explorer navigation overlay for version 2.0 (due in November). Last August, HotBot added support for Direct Hit, which creates links to the top 10 most requested links from a given search.

More advanced users have access to inexpensive metasearching tools that combine, manage, and track results from multiple search engines. Last but not least, for-pay databases such as the renowned Lexis-Nexis (now available with flat-rate pricing on the Web) and newcomers like KnowX bring specialty databases into the mix for serious researchers. None of these tools is a panacea for Web frustration, but taken as a whole, they help you stack the odds in your favor.

Real Names and Real Answers

Trying a few obvious domain names and adding "www" and ".com" is second nature to any heavy-duty Web surfer. But when that fails, Netscape's and Centraal Corp.'s respective attempts to replace domains with keywords can be handy. Netscape maintains its own database so that anyone using Communicator 4.06 or later can opt to type keywords into the address window; Centraal's PersonalName extension works with both Microsoft and Netscape browsers, but it requires a download.

The biggest difference, though, is in how they maintain the names. Netscape determines which keywords make it into its database; Centraal lets sites submit their own words for a $100 annual fee. Centraal reviews the words to ensure that nobody takes a general term such as "cars" or tries to snag somebody else's corporate identity.

Letting marketers choose their own keywords may not seem like the best way to deliver unbiased results, but the Go2.com search engine believes its pure pay-for-placement model can benefit consumers. Most engines either crawl the Web automatically (AltaVista, Excite/Netcenter, Infoseek, Lycos, and the like) or use human editors to organize and categorize sites (LookSmart and Yahoo). In contrast, you must pay to be listed on Go2.com, and higher bidders get better ranking.

Go2.com argues that users end up with only relevant hits because sites are paying to be there rather than showing up by

chance. Unlike Centraal, this company lets high bidders get top billing on general terms such as "cars," but it sells niches such as "antique cars" with the idea that smaller players can get more exposure than they would on a major search engine. It remains to be seen how effective this method will be, but at least you know the score when you do a search.

At the other end of the spectrum, the folks at Ask Jeeves are focusing purely on editorial decisions to achieve their ambitious goal.

"We want to answer the 20 percent of the questions that are asked 80 percent of the time," says Dan Miller, vice president of corporate systems.

A sophisticated natural-language parser matches the text you type in with the questions you are most likely asking. Every question that turns up in your search results (no more than a screen's worth and usually much less) has just one answer, chosen by the editors. Although the editors will look at what people are asking to determine where to focus next, they do not take solicitations from Webmasters or offer paid placement. A kids' version filters out adult sites and looks for sites whose content will be more interesting and more comprehensible to a younger audience.

Ask Jeeves works best when the number of potential answers is relatively small. For example, Dell Computer Corp. and Microsoft's WebTV will be incorporating Ask Jeeves on their respective Web sites by mid-December to help people find technical support information. Otherwise, specific questions sometimes yield more general answers. For example, I asked, "Who was in the movie The Visitors?" and Jeeves found a site with a full summary of the French comedy Les Visiteurs in which I was interested. However, when I asked where I could find the best place to buy the movie on home video, I quickly discovered that all of the Jeeves home-video responses pointed people to Reel.com. Jeeves could find a place to buy videos, but not necessarily the video I wanted or the site with the best prices.

Strength in Numbers

Alexa and Direct Hit rely on collaborative filtering, that is, tracking user patterns to come up with suggested links. For any given site, **Alexa** finds a short list of related links based on where other **Alexa** users who came to that site have also gone. I went to Digital Eyes, my favorite source for DVD movie purchases, and quickly discovered some other sites I hadn't yet compared.

While Communicator 4.5 shows only the related links, **Alexa** 's plug-ins have some cool extras, including stats on the site's popularity in general (based on traffic from major Network Access Points) and among **Alexa** users. NeoPlanet 2.0 will be incorporating these extras by the time it launches.

One of **Alexa** 's side projects has been building an archive of the entire Web itself using a crawler; it recently donated a copy of the Web to the Library of Congress. If you ever click a link for a page that no longer exists, the plug-in gives you the option to search the archive for the original page.

Gary Cullis, chairman and cofounder of Direct Hit, says his technology works with search engines to deliver the "breadth of a search engine but the relevancy of an editorially created index." Direct Hit generates its top 10 list of links based not only on which links its users click on, but on how long they spend at those sites. It gleans this info by using time stamps to see how long users stay away from the engine before returning. (If you don't come back at all, it generally assumes you found something interesting.) Trying to combat the rigged results on the first page, Direct Hit gives precedence to links further down the list.

Cullis says Direct Hit will appear in America Online's ICQ community by mid-December. He also says the company is far along in talks with a major portal that plans to add its technology to a shopping search engine.

If going with the flow isn't your style, a new generation of search engines such as IBM's forthcoming Clever and Stanford University's Google assume that Webmasters are more likely to link to good resources. Sites with more links into them from elsewhere on the Web rank higher on the search-result list.

Serious Research

Metasearch tools, which perform real-time searches across multiple search engines, have been around for years--from Quarterdeck's first-in-the-field WebCompass to newer tools such as Copernic, Quest98, and ZurfRider. Costing between $20 and $49 for the typical home version, these tools do a fair job of collecting results, removing duplicates, and even letting you save results. Infoseek recently launched its own free browser-based tool, Infoseek Express, which performs many of the same tasks.

Intelliseek's $49 BullsEye tackles more sources, with access to more than 300 search engines, including those on magazine sites and software libraries. As with many of the other tools, you can make targeted metasearches to zero in on information in different categories--software, books, news, businesses, people, and more.

However, BullsEye also downloads and summarizes pages using a built-in Verity index. You can save these searches, type in notes for individual search results, and generate sophisticated HTML-based reports that can be saved or e-mailed to colleagues. For $149, BullsEye Pro will perform the same search at prescheduled times in the background while e-mailing, paging, or faxing you the incremental changes. Version 1.0 doesn't let you merge new results into your original search-result screen, but a 1.1 upgrade due by mid-December should fix this.

All of these services give consumers hope that businesses are catching on to the need for easier access to information online. They skim only the surface of the data stream, however.

As Miller puts it, "If the Web is to be the biggest mass medium ever, it has to be usable by the masses." I think it's safe to say there's still a lot of work left before he gets his wish.

Ask Jeeves matches your plain-English request with the closest prefab questions in its database.

BullsEye Pro's built-in Verity engine summarizes each page after weeding out the duplicates.

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Article View

Article 4 of 36
Infonautics Sets New Standard in Online Business Information With New Release of Company Sleuth Web Site

01/04/99
PR Newswire
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Company Also Announces New Marketing and Distribution Partners

For Company Sleuth

WAYNE, Pa., Jan. 4 /PRNewswire/ -- Infonautics, Inc. (Nasdaq: INFO) a rapidly growing **Internet** information company, today released a new version of its free online business information service, Company Sleuth (http://www.companysleuth.com). The enhanced service provides users with improved customization and navigation tools and offers a significant amount of additional content. As part of its effort to grow the Company Sleuth brand, Infonautics has also announced marketing and distribution relationships with more than a dozen leading Web sites.

Company Sleuth now offers users even greater control over the display of information. They can individually select what information they would like to receive in their daily e-mail alerts and what information should be displayed on their Company Sleuth "stakeout reports." Recognizing that all users aren't interested in the same content, these new features allow for greater personalization of the service.

"Company Sleuth has received an incredibly positive response, receiving over a million visits in the first 60 days of availability," said Joshua Kopelman, executive vice president of Infonautics, Inc. "Our users are a diverse group -- investors, entrepreneurs, marketers and corporate executives -- who desire the convenience of a daily e-mail that contains all the new information on their investments, competition and partners. With this new version of Company Sleuth, we have created an even more powerful and convenient corporate research tool."

In addition to the broad array of content previously available through Company Sleuth, Infonautics has added ten other sources of business information to its enhanced service, including:

Federal litigation filed by, and against, companies, provided by MarketSpan, Inc.; Improved SEC filings data from EDGAR Online; Analyst and broker report summaries from Nordby International, Inc.; Company overviews from Market Guide Inc.; "Earnings Whispers" estimates of quarterly earnings from EarningsWhispers.com; Enhanced 15-minuted delayed stock quotes from NewsAlert; New message board content from Silicon Investor and the Raging Bull; Detailed patent information including full claims and descriptions; Detailed Domain Ownership Information.

As part of its efforts to brand Company Sleuth as the leading online provider of free, legal inside business information, Infonautics has also announced marketing and distribution relationships with more than a dozen leading web sites and services, including **Alexa Internet** , Ask Jeeves, Earnings Whispers, INVESTools, Morningstar, Nando Media, Raging Bull, and Stocks.com.

"We are very excited to be working with such leading **Internet** brands. These marketing and distribution partners will help increase Company Sleuth's exposure and reach in the marketplace," said Kopelman. "We plan to leverage our position as a leading provider of business information to attract additional marketing and distribution partners to our service."

About Company Sleuth

Company Sleuth is the **Internet** 's leading source of free, legal, inside information. With Company Sleuth, users receive a daily e-mail report detailing the business activities, financial moves and **Internet** dealings of selected companies -- often before they are officially announced or reported. Currently, Company Sleuth tracks U.S.-based, publicly traded companies and plans to track private companies soon. Company Sleuth searches the **Internet** and delivers current events-type financial and business news and information on a particular user's competitors,

investments, prospects and clients. Registered users also have access to Company Sleuth's *"Top 10 List" which lists the* ten companies that have the most people watching them. The current Top 10 includes: Microsoft, Dell, Cisco, America Online, Lucent, Intel, Yahoo, Compaq, Infonautics, and the Walt Disney Company.

About Infonautics

Infonautics, Inc. is a rapidly growing **Internet** information company that provides online information services for schools, libraries, consumers and businesses. Its award-winning Electric Library service was the first reference service of its type on the **Internet** and today is the fastest growing electronic reference product for schools and libraries, serving more than 9,500 institutions in all 50 states. Electric Library is also one of the largest paid subscription sites on the Web with more than 60,000 paying subscribers. The Company's newest service, Company Sleuth, (http://www.companysleuth.com) is a free e-mail alerting service that conveniently aggregates hard-to-find current events-type business information on the **Internet** , and has tens of thousands of registered users. The company also provides custom content-management and online archive services to major publishers and other content creators. Infonautics was founded in November 1992, and is headquartered in Wayne, PA.

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Return to Headlines

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equivalent of winning the Olympic downhill, but if this stuff works, Cubus could find itself on the fast track.

BIRDBRAIN GETS WINGS: Positive news to start out the new year: Looks like we've got what they call in Silicon Valley a "category killer." A few weeks ago, we told you about Birdbrain Technology, the two-man Lafayette company responsible for developing Polly Professor in the hours not spent at their "real" jobs as consultants for KPMG. Polly Professor is a software program that teaches your pet bird to speak, and can be programmed to keep your bird company while you're away.

Well, it looks like Polly Professor is a hit. Petco, the big daddy of the pet industry, has just decided to stock the product, as have a number of other pet stores, and it looks like people are buying. Next step? Maybe moving the office out of founder Howard Bishop's East Bay garage.

CARE CLIMB: Roseanne Siino, Netscape's vice president for corporate communications is on her way up . . . Mount Kilimanjaro. Later this month, Siino and co-worker Kate Gerwe plan to take on the world's second-tallest mountain for charity. They are participating in the fourth annual Climb for CARE, a trek to the 19,500 foot summit of Kilimanjaro to raise both money and awareness for the nonprofit.

In addition to the climb, the two will spend time in Zanzibar and Tanzania visiting CARE projects, including a village that is struggling to find a balance between the needs of its people and the land of a new, nearby preserve.

Siino says she was attracted by both the organization and the personal challenge. "It's so easy to get wrapped up in high tech -- and conversations about where everyone is buying a house -- yet people in the rest of the world just need to worry about survival. And this is more than just writing a check."

Siino and Gerwe have managed to raise $60,000 in just a few weeks. All of the cash goes directly to CARE projects. If you're interested in helping, e-mail Siino at Roseanne@netscape.com.

Outtakes is a biweekly column that takes you behind the scenes of New Media News, which appears Sundays at 9:30 a.m. on KRON-TV and twice daily at 6:30 a.m. and 6 p.m. on BayTV. Stan Bunger reports for the show; Jan Boyd is the producer.

PHOTO

Return to The Times

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tive tasks of searching. The visualization of search result sets will allow us to handle a lot of information quickly. These new tools will allow searchers to move toward acting as evaluators of information instead of merely robots of retrieval.

Alexa: Search Engine Helper

Bruce Gilliat and his partner Brewster Kahle, inventor of the WAIS (Wide Area Information Server) system, founded Alexa Internet [http://www.alexa.com] in 1996 to answer a need. Alexa's data revealed that one percent of all Web pages disappear after one week. These pages range from personal home pages to public discussion group archives to early versions of commercial Web sites. Since 1996, Alexa Internet has committed itself to gathering, storing, and preserving the Web to keep sites available long after they have been altered or removed from the Web. This year, Alexa donated a full snapshot of the World Wide Web from early 1997 to the Library of Congress as a fleeting but important glimpse into what existed on the Web at that time.Alexa is a toolbar utility that you can download for free. Whatever page you pull down, Alexa gives you all the metadata about it, e.g., how long the page has been up, whether Alexa has an archive version of it, and suggestions for related sites.

How does it do this? Like Northern Light, Alexa does not trust a Web site to describe itself well. Alexa assigns metadata to the pages it indexes based on frequency of usage and who points to whom.

A last important feature of Alexa are "backpointers." This feature lets users know who points to whom. It gives bragging rights to Webmasters, looking to answer the question, "Who points to my site?"

In the future, Alexa would like to rate sites for content (violence, nudity, etc.). They will solicit librarian input for useful ways to rate Web pages.

Visualize That Result Set

Steve Arnold, president of Arnold Information Technologies (AITI), declared that industrial-strength Web searching has arrived, brought to us by NIST, the National Institute of Standards and Technology [http://www.nist.gov], an agency of the United Stated Department of Commerce. Arnold outlined some new services available now.

Autonomy, Inc.
www.autonomy.com

This company can put up agents that will peruse news feeds. Their search results hot link to original news articles.

iAtlas.com
http://www.iatlas.com

This site provides current competitive intelligence. It offers complete lists of Web sites owned by one company. Their information comes from the company formerly known as ABI (American Business Information).

Plumb Design
http://www.plumbdesign.com

This company, which designed the front end technology for searching the Smithsonian Web site using a multi-object search and display, uses technology they probably originally developed for the Department of Defense. Still, it's cool.

Memex
http://www.memex.co.uk/nonshock home.htm

Memex Technology Limited is a leading worldwide database supplier for the law enforcement, military, and commercial markets. It allows for Web link analysis and real-time, full-text database searching.

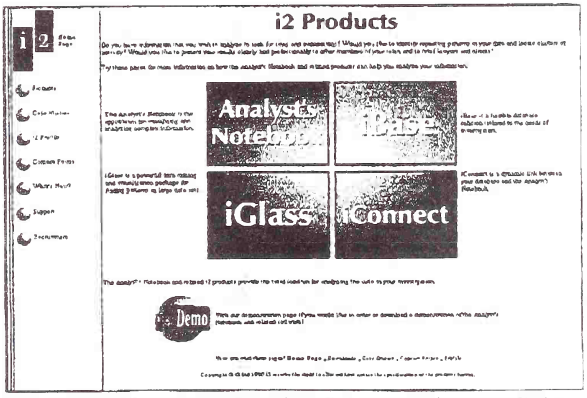
i2
http://www.i2.co.uk

i2 software makes a visual diagram of a database, allowing law enforcement officials to visualize relationships in a crime case.

Excalibur Technologies
http://www.excalib.com/index.html

This company specializes in the indexing of images. It probably originally developed its technology for military satellite image indexing and retrieval. Arnold considers the indexing of images very important on the

(continued on page 28)



i2 turns a spreadsheet into "Col. Mustard did it in the Drawing Room with a candlestick." (http://www.i2.co.uk)

(continued from page 27)

Web — since 95 percent of Web content is non-text.

Datops: Donner du sens l'information ("Making Sense of Information") http://www.datops.fr

The Datops product is a visualizer. It depicts data in an information space. The user appears to fly through the three-dimensional domain of a search result set. Arnold predicts that as desktop computers become more powerful, applications such as Datops' will come to closely resemble computer games.

Dummies Go Fishing

While we wait for these fabulous visual representations of our search result clusters, what should we Web prowlers do? Reva Basch, of Aubergine Information Services, just completed a book about searching the Web for the "Dummies" book series. She offered some suggestions and outlined some trends to help everyone from super-searchers to Web neophytes.

"Aggregation. Differentiation. Integration." All these blur together in the online world, according to Basch.

Basch believes that information on the Web is becoming more focused, that is to say, clumped together, or "aggregated." She advises that searchers can save time and effort by finding and using pre-aggregated sites and subject catalogs such as Argus Clearinghouse, Yahoo!, and the Mining Company. Other collections include online vendor collections and Northern Light, gateway collections like *The New York Times'* Cyberguide and Fedworld, and virtual reference sources such as online almanacs and dictionaries.

Finally, Basch recommends checking expert, or "guru" pages. These Web pages carry lists of pointers designated by folks "in the know." For example, *St. Petersburg Times'* news researcher Kitty Bennett maintains a guide to "Sources and Experts" [http://sunsite.unc.edu/slanews/internet/experts.html] for her paper's intranet. Reva also recommended the All-in-One Search Page [http://www.albany.net/allinone].

Aggregation through acquisition is happening all over the online industry. For instance, AOL bought CompuServe and — at presstime — announced the acquisition of Netscape. This means that information companies are experiencing "survival of the fittest." They are also evolving.

"This is the most **exciting** time ever to be in the **search business.**"

Differentiation is one way that species survive. The current trend is for major search engines to differentiate themselves from each other. Before they did that though, they all adopted the "channels" model of subject collection. Then, they all wanted to become "portals." Now, they are all busy partnering with industry to add proprietary information to their sites.

Some examples of unique services include Hot Bot's "Direct Hit" that offers the 10 most visited sites for your common query. Infoseek offers "ESP" that bounces back subject picks for one- or two-word popular topic searches.

Excite differentiates itself with its "More like this" button. They have just added a feature that gives you a set of information to go along with your query. This feature works best for Web newbies doing common searches.

At Ask Jeeves, they have a staff of people who make a list of frequently asked questions. When you ask a natural language question, Ask Jeeves comes back with a list of FAQs. AltaVista has incorporated the Ask Jeeves application into its search page. AltaVista also features a "Real Names" function that can bounce back company contact information. This search engine also boasts a machine language translation function that can give the user at least a sense of the meaning of a page written in another language.

Basch sees integration occurring on the Web as LEXIS-NEXIS finally gets a graphical interface, and Northern Light offers free and gateway resources in the same search result set.

Although no one can predict the future exactly, Basch does confess one secret for discerning Web trends. She tears out articles from magazines and spreads them out on the floor to scan for common themes. From what her magazines tell her, we still have a long way to go before we can easily access all the information that we need.

Reeling It In

"Why does it seem that searchers seem to work all the time?" Sue Feldman asks. For the thrill of finding the answer, she says. "This is the most exciting time ever to be in the search business. So, who can be surprised that we spend a lot of time on the Web?"

By the way, Monica Lewinsky's birthdate is July 23, 1973. One of my colleagues accidentally found this out by reading a July transcript of the television show *Politically Incorrect* (Thank you, Bill Maher, for the information. Your humorous monologue was the only factual information source I could find on the open Web with the biographical information my patron wanted.

[Slides and other materials from most of the talks from the 1998 Internet Librarian Conference are available at: http://www.infotoday.com/il98/presentations.htm.] *

i.e., author, title, and subject. Descriptive metadata describes the intellectual characteristics of an object and provides access points. Descriptive metadata on a Web page should include at least a title and a few words describing the page subject.

Administrative metadata enables the appropriate management of an object, i.e., by specifying the file format and size.

Structural metadata is a new category for librarians, rarely used in MARC records. It provides a structure to associate a Web page with other files that may comprise a single intellectual item. In other words, in the topsy-turvy world of hypertext, it knows which file is chapter one, which chapter two, etc.

Metadata applies to several emerging standards. One metadata standard currently under development is the infamous "Dublin Core." The Dublin Core aims to "facilitate discovery of electronic resources" by standardizing 15 attributes, or descriptive information elements, available for addition to Web page headers. Among the 15 elements are "title," "creator," "subject," "date," "format," "language," "relation," and "rights." Notice that these labels cover the gamut of descriptive, administrative, and structural metadata. (Learn more about the Dublin Core at http://purl.oclc.org/dc/index.htm.)

Tennant enumerated the issues involved in adding metadata to Web pages, including the decision of which elements to capture, and the least amount of metadata needed for capture to enable indexing and retrieval of a page. His conclusion: The best metadata practice is to capture as much information about your document as you can afford.

Tennant offered Web links for those who want to learn more about metadata:

The Dublin Core
http://purl.oclc.org/dc/index.htm

Fifteen core fields for HTML pages.

Library of Congress National Digital Library Program
http://www.loc.gov

Lots of information about item-level metadata.

Tennant's presentation slides appear on his own Web site at http://sunsite.Berkeley.EDU/~manager/Presentations/InternetLibrarian/1998/Metadata.

XML: A Solution to Metadata Nightmares?

"Yes!" according to Darlene Fichter of the University of Saskatchewan Libraries. XML, or "eXtensible Markup Language," is a another new standard for data interchange and markup and works great for archiving electronic data. XML can code documents internally using "meaningful tags" that a Web author creates. Here is a sample:

<author>John Steinbeck</author> wrote <title>Cannery Row</title> in <year>1937</year>.

HTML mixes structure and presentation. That is, HTML requires the use of structure tags, e.g. <table>, to achieve a desired layout. This mixture

(continued on page 26)

Y2K Ready or Not

Y2K: When will it hit? It already has. Look at your credit card expiration date. Still, Hope Tillman of Babson College reassures us, most software and hardware vendors have already become Y2K compliant after working on it for the last few years.

What, exactly, is the Y2K problem? The problem of computers handling dates. Two-digit year/six-digit dating systems have their roots in the birth of computers in the 1950s, when no one apparently thought about the turn of the century. (In the middle of the Cold War era, who thought mankind would make it to the Year 2000?) In a six-digit date system, New Year's day of the year 2000 — 01/01/00 or 00/01/01 — will initiate database sorting problems, that is, in items sorted by date, the year 2000 will precede the year 1999. Our computers require a switch from a six-digit system to an eight-digit date — 01/01/2000 or 2000/01/01.

Another consequence of the Y2K problem is incorrect leap year calculations. The year 1900 was not a leap year but the year 2000 is. Also, some internal date representations in hardware registers as well as some PC BIOSs are not Y2K compliant. All pagers will have a problem because none of them are set to calculate leap years, more or less the turn of the millennium.

What will happen on January 1, 2000? Some old IBM compatibles will simply not turn on. If you own an older PC, check with your hardware vendor for a Y2K patch. Mac owners can relax, however. Apple computers have always been Y2K compliant.

We all have the same deadline to fix our problem, and we can't push it back. Babson recommends that every organization do a software and hardware inventory, then test it by setting the clock ahead to the year 2000. With each piece, decide if you really need to fix it, or if you can live with it for now? Do a triage analysis: Should you fix a piece, replace it, or defer a decision? Consider the costs and the time involved for each option.

Tillman offered this list of links to help patch up your Y2K problems:

National Software Testing Laboratory's NSTL Online: YMARK2000
http://www.nstl.com/html/nstl_ymark2000.html

Rightime (Test 2000)
http://www.rightime.com

Greenwich Mean Time (Check2000)
http://www.gmt-2000.com/main.htm

PinPoint Software Corp
http://www.pinpnt.com

Y2K Plus
http://www.y2kplus.com

Norton 2000
http://www.symantec.com/sabu/n2000/index.html

Tillman's final advice: Consider Y2K compliance as a disaster preparedness problem. Just as you have full, ready to go fire extinguishers, be certain to get Y2K compliance documents for any new piece of equipment or software that you buy. Also, go back and get them for the electronics that you already have. Be prepared!

(continued from page 25)

makes it hard to process the document automatically. On the other hand, SGML, or "Standard Generalized Markup Language" has more features than the Web requires and is difficult to learn. XML stands between, wedding the strengths of SGML and HTML.

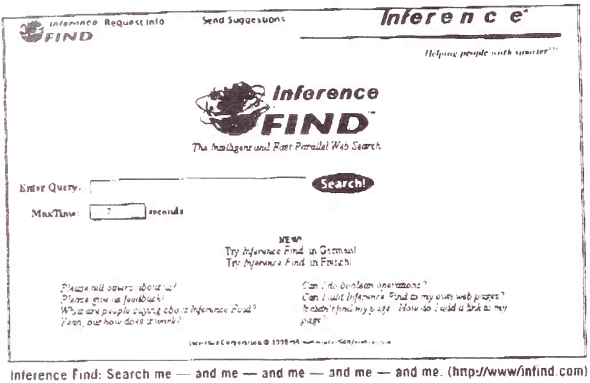
XML tags describe content, not just layout. These meaningful tags allow for more precise searching and facilitate the migration of electronic data from one system to the next. An open standard, XML is text based with a 40-page long specification (as opposed to the 500 pages needed for the SGML spec). For more information on XML and its purpose, check out the Web Standards Project: http://www.webstandards.org/index.html

Search Engines Today

Sue Feldman of Datasearch asks, "What do industrial strength users need from the World Wide Web? Precision," she answers. "High-quality information. We hate to waste time. We are intermediaries, so we can't guess what are clients really want. Precision is our only reward." However, says Feldman, our clients often seem happier with partially relevant search results than precise results, probably because they often don't know how to ask for what they want. As information professionals, we want text and graphics that convert easily into our documents and spreadsheets. We need tools that discern patterns and save time.

Feldman emphasized that different search engines fit different searching styles. Her current favorite is Northern Light because its folder sorting system gives her all her results at a glance. Also, Northern Light uses a "fuzzy and," i.e., it includes plurals and singulars in its search automatically. Consequently, it gives a broader result set than an exact Boolean search would do.

Infoseek remains among Feldman's favorites because it indexes serious research sites as well as hobbyist sites. It also has useful, clear annotations.



Inference Find: Search me — and me — and me — and me — and me. (http://www/infind.com)

Feldman notes that we waste lots of time every time we have to load a Web page only to find out that it does not relate to our search needs. She also appreciates that Infoseek was one of the first to offer precise phrase searching.

Excite has always been able to parse a search statement as a phrase. Excite also has the "more like this" feedback weighting which doesn't broaden the search but makes it more focused. This allows a search result set that makes a nice clump, or cluster, without cutting things out that a hard Boolean search would exclude.

Hot Bot boasts an extensive and easy-to-use form for building a search. Its big disadvantage is that it pulls in duplicate sites. Feldman uses Hot Bot primarily for product searches, not to find educational and research sites.

AltaVista offers better access to research sites. It also uses the "Ask Jeeves" question/answer technology. Additionally, with its "Refine" button, it can generate a flow chart with pull-down menus of related search terms. Feldman warned that if you add these terms to the search, AltaVista counts them as mandatory terms and gives them more weight than your original search terms.

Metasearch engines give a nice broad overview of what is actually out there. They sort results by idea cluster. Feldman suggests a metasearch engine called Inference Find, which she has found particularly adept at searching European government information.

Inference Find: The Intelligent and Fast Parallel Web Search
http://www.infind.com

Lycos, once her search engine of choice, has fallen off the list of Web indexes Feldman tracks because, in her words, "It is useless."

Feldman predicts that Web searching will integrate more with desktop applications. This trend has already begun in the latest release of Macintosh software, which contains an application called "Sherlock" that searches your hard drive and the Web at the same time. Infoseek "Express" works in a similar way. Both of these functions can launch from the middle of another application. They can search while you continue to work within another computer program.

IBM's "Clever Searching" [http://www.almaden.ibm.com/cs/k53/clever.html] targets "hub" or "authority" sites, thus cutting garbage sites from search results. Hot Bot's "Direct Hit" does a similar service for popular topics.

In the future, Feldman predicts intelligent agents (like the paper clip in Microsoft Word) will aid searchers to find new sites. These new tools will alter their behavior to integrate new terminology and handle the repeti-

Searcher
DATABASE PROFESSIONALS
Medford, NJ
Circ - 3,200
10 Times/Year
JANUARY 15, 1999
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Internet Exoress

Searchers Net Treasure in Monterey

by Irene E. McDermott
Reference Librarian/System Manager
San Marino Public Library

Patron telephone query from last autumn: "What is the birthday of Monica Lewinsky?" Seemed simple enough. I just typed my terms into my favorite search engine and pulled up the answer, right? Wrong. In my first 10 hits, I got:

"Free aXXXess to the Hottest Sites"

"Teenager Sluts"

And, the closest thing to a relevant hit:

"The ORIGINAL CuM On MoNiCA !" (Meant for Adults over 18, if you're a Kid GET Lost!!)

Why, why did these sites dominate my results list, while the information that I needed was nowhere to be found? I learned the answer last November at the second annual Internet Librarian Conference sponsored by Information Today.

The conference was huge: At least 1,500 information professionals attended, up 50 percent from the first conference in 1997. The program was packed, like a three-ring circus with three and four tracks happening at the same time. The result — something for everyone, but no way for one person to cover everything. I concentrated on what I love best, searching that of Web to haul in those information treasures for me and my clients.

The Web Is BIG

How big? According to Bruce Gilbat of Alexa (http://www.alexa.com), the Web currently consists of about 20 million "content areas" hosted on one million sites. It continues to double in size every eight months. Alexa gave the Library of Congress a snapshot of the Web from early 1997. Even then, it took up two terabytes. Gilbat claims that even the biggest, most robust search engines only index about one percent of the World Wide Web.

Joyce Ward of Northern Light (http://www.nlsearch.com) pointed out that her search engine, even though relatively new, receives far more hits per day than Dialog ever did. Additionally, it must deal with rampant "spamdexing" i.e., the stuffing of Web page metadata fields with words that rank highly in search engine weighting schemes.

I personally experienced spamdexing when I searched for "Monica Lewinsky birthdate" in Northern Light. The site ranked "most relevant" by this search engine contained metadata that reads in part: "Porno Star Report monica lewinsky nude bill clinton president clinton hillary Clinton Naked Kenneth Starr report sex adult xxx XXX nudity - candid public adult screensavers. . . You get the picture.

Ward noted that the Web has become so humongous that relevancy ranking search results by word doesn't really work anymore. Still, she observed that users want fresh and spam-free results that are comprehensive, yet manageable.

What can a search engine do? It must take artificial steps for ranking its result sets. Most search engines use one of three tactics. Some, like Lycos and Excite, arbitrarily abridge the databases that they index. Others re-sort their result set by popularity. AltaVista uses a scheme to refine its results based on collections of the roots of words. Refinement techniques like AltaVista's work well for any query and give searchers good control over their results. Still, few people bother to use it.

Remember when the writer Nicholson Baker exalted the library card catalog in a *New Yorker* article? He insisted that the card catalog system was better than a computerized index because he could tell how popular a book was by how much finger dirt stained the card. Ward says that the Hot Bot search engine uses a similar idea to sort its result sets. Its new feature, called "Direct Hit," re-sorts search results by the frequency with which people have visited the sites. This technique works well for common queries, according to Ward, but falls short for unique queries or new sites that haven't had time to build a following.

How does Northern Light tune its search result sets? Using an artificial intelligence program, it applies classification "metadata" to every page it indexes. In other words, it tags the Web pages in its collection with subject headings from its controlled vocabulary, or "ontology." This ontology has its roots in many sources, including UMI subject headings, Library of Congress headings, Dewey, and the aisle headings at Sav-On Drug Store. Be-

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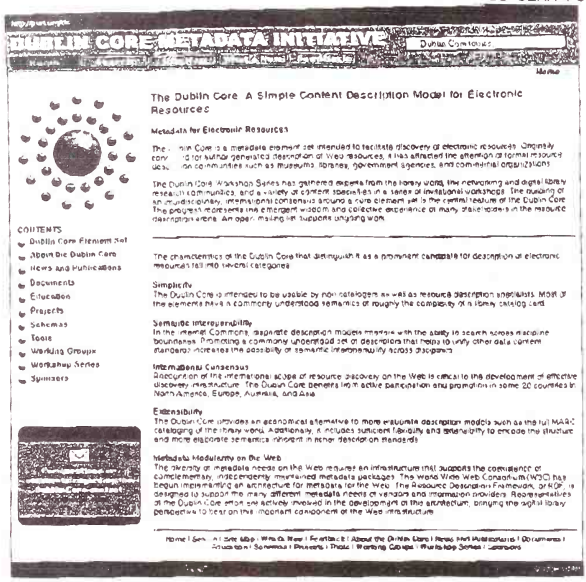
sides subject, Northern Light also classifies pages by type (e.g., book review, recipe, etc.), language, and source. With these tags they can cluster results into "folders" that co-locate Web pages on similar subjects. Some folders contain further sub-divisions of the main folder subject. The folder feature allows the user to visualize the different implications of a search. For example, a search for "bond" will generate folders for "James Bond" and also "financial bonds."

Northern Light maps its subject headings to those of its partners. In this way, it works like the online catalog standard known as Z39.50. So you can use the Northern Light interface to search other databases, such as UMI, for example.

Developing an ontology from scratch then applying it to every entity in an index seems like a lot of work, not to mention a huge investment. Why does Northern Light do it? Aren't Web pages now supposed to have subject words in their header metadata fields?

It turns out that very few Web pages currently have subject keywords in their headers. Web pages that use subject tags usually misuse them, repeating words in order to get higher rankings from search engines. This spammy metadata explains why, when I looked for Lewinsky's birthday, all I got was adult entertainment. Poor Monica. Her name will live forever in the meta-tags of pornographers. Because spammers have abused meta-tags so often, Lycos, Excite, and Metacrawler ignore these fields when ranking search result sets.

With so few trained librarians writing subject meta-tags, even well-formed subject tags often repeat their subject words. Northern Light decided to assign its own classification to its database to get meaningful results to its users. Still, that is only one solution. All the search engines struggle to balance the Webmaster's desire to get his or her page to the top of a search engine against the searcher's desire to get relevant results.



Here we are at the Dublin Core. Which way to the pub? (http://purl.oclc.org/dc/index.htm)

This Crazy Little Thing Called "Metadata"

We've all heard the word and pretended that we understood it. Ah yes, "metadata". Really the wave of the future, isn't it, dahling? But what the heck is it? Several things actually.

One example of metadata are those pieces of information that should go in the head section of an HTML page just over the title. Here is a real-life sample:

```
<HTML>
<HEAD>
<META NAME="GENERATOR"
CONTENT="Adobe PageMill 2.0
Mac">
<META NAME="KEYWORDS"
CONTENT="the starr report, monica
lewinsky, president clinton">
<TITLE>Monica Lewinsky .Com</
TITLE>
</HEAD>
```

Roy Tennant, Digital Library Project Manager for the library at University of California, Berkeley, explained that one can consider metadata a kind of cataloging for digital resources. Like traditional cataloging of print sources, metadata aims to describe something in a structured way. Tennant emphasized the importance of the word "structured." He noted that MARC records, for instance, are very highly structured. Still, metadata writing differs from cataloging. For one thing, it makes no attempt to follow AACR 2. Metadata captures less information than a MARC record, looking at it one way, and more, looking at it another.

Metadata can be divided into three different types: descriptive, administrative, and structural.

Descriptive metadata provides information similar to a catalog record,

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Presidio Offering Solution

Thousands of Bay Area high-tech workers creep and crawl to work every morning, stuck in the traffic jams that seem to get worse each week.

But that scene is only a bad memory for a number of staffers at Alexa Internet, a San Francisco maker of software that helps Web surfers find similar sites. The company's offices are at the Main Post area of the Presidio, and eight of the company's 34 employees live on the Presidio grounds. They pay what's considered "market rate" rent (nobody would say what they were paying), but they get an easy commute and can't-be-beat surroundings.

It starts at the top: CEO and cofounder Brewster Kahle lives in what once were Army general's quarters on Upper Simmons Loop. The home comes complete with a knockout view of the Golden Gate Bridge.

Alexa's marketing chief, Cynthia Lohr, lives in what she describes as a "modest 2½-bedroom" unit that once housed a colonel's family. Lohr, who lived in Berkeley for 10 years and describes herself as "an East Bay-er at heart," says she jumped at what she calls a "once-in-a-lifetime opportunity" to erase her commute and live on the Presidio.

If the Presidio Trust has its way, there will be many more companies like Alexa with a significant number of Presidio residents. With more than 1.2 million square feet of nonresidential space currently leased or available for lease, Presidio managers hope to attract other commercial enterprises.

Nearby housing can only help those companies in their recruiting efforts. Says the Presidio Trust's Erica Southworth, the housing "is certainly an advantage for organizations hoping to locate on the Presidio."

OUTTAKES

Stan Bunger and Jan Boyd

GOING FOR GOLD: The Salt Lake City Winter Olympics are still three years away, but for a San Francisco software startup, the worrying already is under way.

Cubus Corp. has landed a contract to provide project-collaboration software to the Boyer Group, a developer. Boyer's $500 million Olympics-related Gateway Project involves seven square blocks of Olympic facilities (dormitories, restaurants, theaters) in Salt Lake City.

The Boyer Group is managing the work of 10 architecture, engineering and construction companies. It's a recipe for confusion. If an architect re-draws plans for a walkway, for instance, the new blueprint has to be passed around for comment and approval, and communications breakdowns can easily occur.

Original plans called for setting up a 3,000-square-foot office in Salt Lake City and requiring each company involved in the project to have people available for collaboration meetings there six hours a day.

That $1.5 million plan has been shelved. Instead, contractors log in for about two hours a day from their own offices, using Cubus' ReviewIt

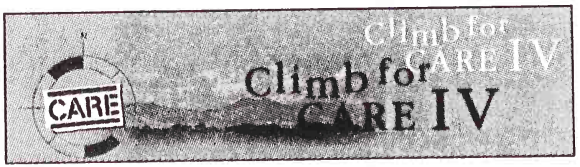
ı to Your Daily Commute

software. The Web-based software lets users post new plans, review and comment on other postings.

For Cubus, it's a major real-world test of software that was only released three months ago. It may not be the equivalent of winning the Olympic downhill, but if this stuff works, Cubus could find itself on the fast track.

BIRDBRAIN GETS WINGS: Positive news to start out the new year: Looks like we've got what they call in Silicon Valley a "category killer." A few weeks ago, we told you about Birdbrain Technology, the two-man Lafayette company responsible for developing Polly Professor in the hours not spent at their "real" jobs as consultants for KPMG. Polly Professor is a software program that teaches your pet bird to speak, and can be programmed to keep your bird company while you're away.

Well, it looks like Polly Professor is a hit. Petco, the big daddy of the pet industry, has just decided to stock the product, as have a number of other pet stores, and it looks like people are buying. Next step? May-



be moving the office out of founder Howard Bishop's East Bay garage.

CARE CLIMB: Roseanne Siino, Netscape's vice president for corporate communications is on her way up . . . Mount Kilimanjaro. Later this month, Siino and co-worker Kate Gerwe plan to take on the world's second-tallest mountain for charity. They are participating in the fourth annual Climb for CARE, a trek to the 19,500 foot summit of Kilimanjaro to raise both money and awareness for the nonprofit.

In addition to the climb, the two will spend time in Zanzibar and Tanzania visiting CARE projects, including a village that is struggling to find a balance between the needs of its people and the land of a new, nearby preserve.

Siino says she was attracted by both the organization and the personal challenge. "It's so easy to get wrapped up in high tech – and conversations about where everyone is buying a house – yet people in the rest of the world just need to worry about survival. And this is more than just writing a check."

Siino and Gerwe have managed to raise $60,000 in just a few weeks. All of the cash goes directly to CARE projects. If you're interested in helping, e-mail Siino at Roseanne@netscape.com.

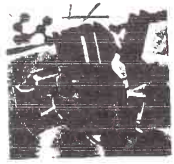
Outtakes is a biweekly column that takes you behind the scenes of New Media News, which appears Sundays at 9:30 a.m. on KRON-TV and twice daily at 6:30 a.m. and 6 p.m. on BayTV. Stan Bunger reports for the show; Jan Boyd is the producer.

Scientific Computing & Instrumentation

Monthly

JANUARY 15 1999

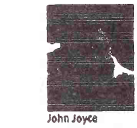
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S&I ONLINE SCIENTIST

Alexa Rates the Usefulness of Web Sites

Tired of wasting your time on useless web sites? Alexa evaluates sites for you.



John Joyce

With the explosive growth of the Web, a major problem is separating the good sites from the others. One approach to solving this problem is exemplified by Alexa from Alexa Internet (www.alexa.com).

Alexa is both a program and a data base designed to help identify Web sites that are actually useful. Its researchers are the Web users. Alexa runs in conjunction with your Web browser and provides real time information on the sites you visit. In operation it appears as an information bar which can be docked at the top or bottom of your browser. Versions are available for Netscape Navigator 3.0x, Netscape Communicator 4.0x and Internet Explorer 3.0x, though it is restricted to running under Windows 95/NT on a 486 or Pentium machine.

The key to its usefulness is that it allows you to rate the value of the sites you visit. It also allows you to generate linkages between sites. This information can then be used by other researchers to weed out the bad sites and identify similar sites to those they've found useful.

There is no charge for using this service. Like many of the services on today's Internet, it is supported by advertising. While the advertising on "free" services is usually intrusive and annoying, it is not as intrusive on Alexa as it could be. One of the rather sneaky, but useful, things that the programmers have included in the system is a link to the [illegible] Browser. The [illegible] customized so that non subscribers have limited access to the encyclopedia, or you can enter additional subscriber information for full access to the encyclopedia. You can also search the The Merriam-Webster Dictionary Online and The Merriam-Webster Thesaurus Online.

Operation of the program is very simple. Click on the circled A to obtain information about the program, set program options, and access the Web tutorial. Click on the left triangle, the Stats button, to obtain detailed information about the currently active Web site. Note that the site owner and the current Web traffic are displayed to the right of the button. Click on VOTE to provide your feedback on the usefulness of the active Web site. Click on the right triangle, the Links button, to view a list of the top ten related Web sites or enter a new association. Note that the top four related Web sites are shown to the right of the button.



Clicking on the building silhouette, the Archive button, will load a copy of the Web page from Alexa's archives, if it exists. If the page is in the archive, the button will show up as a blue page. Otherwise it will be grayed out. Currently, Alexa maintains an archive in excess of 500,000 sites, containing over 10 terabytes of data. Since most of this data is stored on tape, page retrieval can sometimes be slow, but it may be the only way to retrieve Web pages that are no longer active. Clicking on the FBI icon, the [illegible] Browser, [illegible]

the reference window linking the Encyclopedia Britannica, the dictionary, and the thesaurus. In addition to the on-line help, problem resolution aid can also be obtained from Alexa's Help Desk by calling 888-88-ALEXA or by e-mailing support@alexa.com.

If you open multiple browser windows, the Alexa display will correspond to the active window. It is possible to run Alexa with both Netscape and Microsoft browsers active, but only information for the most recently opened browser will be tracked.

While I've found the information Alexa provides interesting, its usefulness is somewhat erratic. When the Internet is slow, Alexa only exacerbates the local problem. I suspect some will find it useful and others will find it so annoying they'll uninstall it right away. At the very least, it is useful to show one of the directions that Web development is going. As Alexa's developers release new versions and as its data base grows, I expect it's usefulness will continue to increase. Whether anyone else picks up on this idea and runs with it will be interesting to see.

Astro Babe?

Well, that's how the journal Annals of Improbable Research (www.improbable.com) refers to her. The person in question is astronomer and musician Dr. Fiorella Terenzi (www.fiorella.com). Possessing a doctorate in physics from [illegible]

ship in the National Academy of Recording Arts and Sciences, Dr. Torenzi has been referred to as a cross between Carl Sagan and Madonna. With everyone searching for ways to spark an interest in science in our youth, this is, perhaps, not a bad combination.

Specializing in astrophysics, she is one of the pioneers in the field of acoustic astronomy. Dr. Torenzi has used this interest to produce several successful musical CDs and, of more interest, a multimedia CD-ROM giving a guided tour of astrophysics (Invisible Universe, EduCorp (Voyager), www.educorp.com, ISBN: 1559406798, Macintosh & PC, $29.99 (c)1995). She has also written a captivating book called Heavenly Knowledge: An Astrophysicist Seeks Wisdom in the Stars (Avon Books, www.avonbooks.com, ISBN: 0-380-97412-6, $22.00, (c)1998). In it she imparts her enthusiasm for astronomy and how it's affected her life. The sense of humor apparent in these projects makes it easy for this self-styled Divadoc to create a rapport with her audience. Anyone with a budding interest in science, particularly astronomy or astrophysics, should be encouraged to delve into her work. If nothing else, they are a great way to break stereotypes.

About the author: Dr. John R. Joyce is a contributing editor to SC&I and the LIMS manager for the division of consolidated laboratory services (DCLS) in the Department of General Services of the Commonwealth of Virginia. He can be reached at 804-786-5452. Dr. Joyce's email address is jjoyce@dgs.state.va.us.

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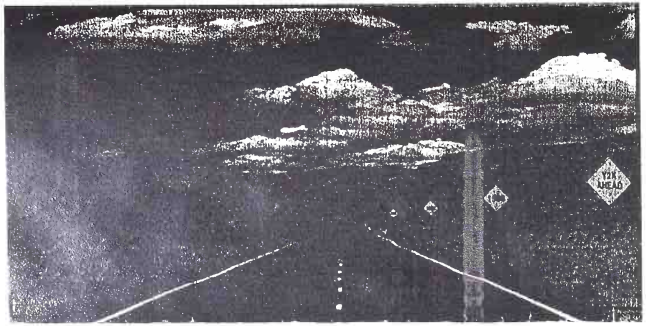
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THE ROAD BEHIND

It's Y2K minus [illegible] coming. Do you know where your bugs are?

By Morgan Haw

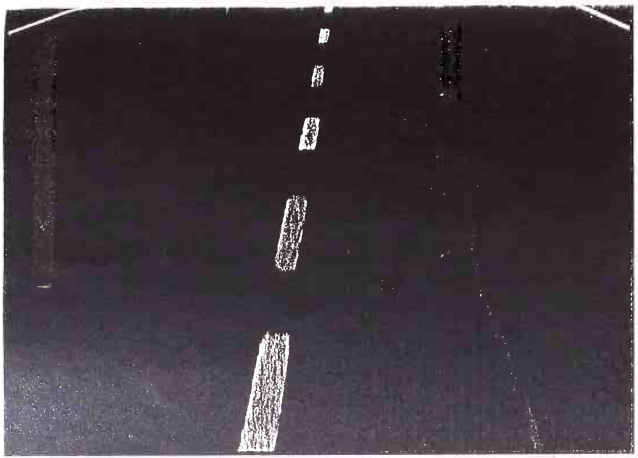


video testimony during a government investigation. But let's not dwell on Bill Gates more than necessary.

The real news of 1998 is that it brought us within spitting distance of 2000 and the end of the world as we know it. Many of the most vocal pundits in the technology world (the cab drivers at Comdex) confidently stated that between 11:59 p.m. on December 31, 1999, and 12:01 a.m. the following day, elevators would stop elevating, Viagra would stop invigorating, Santa would accidentally be shot down by

families with their food storage needs since 1953") took advantage of the growing millennialist-cum-survivalist paranoia with heartwarming bulk e-mail offering a complete, nutritionally balanced food storage program for as little as $1.55 per meal, per person. (Spam not included.)

Publishers jumped on the bandwagon. The usually calm *Utne Reader* stuffed recent issues with the breathless *Y2K Citizen's Action Guide* (also available at **www.utne.com/y2k/index.html**) chockablock with such



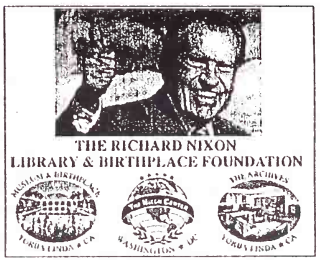
Bill Gates may not be roadkill—yet. But your PC just might be a casualty on the night of December 31, 1999. Should we worry about the fate of Gates? Should we fret about our PCs time-stamping our unread memos with "January 1, 1900"? Should we look forward, angel, and start stuffing our mattresses with doubloons in case the world grinds to a halt in just 12 short months?

Nah. Let's look back, not in anger, but in wonderment. After all, 1998 showed us a live birth on the Internet. (Luckily, RealNetworks' RealSmeller software was still in beta.) We saw a septuagenarian blast off into space and crash repeatedly (that is, if you watched the "live" video feed at CNN.com). In 1998, we saw sordid deeds uncovered in NORAD, and credit cards would become worthless. Of course, these same cabbies confidently claimed they couldn't break a $10 bill for a $6 fare.

Y2K: A Bug's Life

Despite prophecies of doom, Hershey began to tout M&Ms as the "official candy" of the new millennium. (Think Roman numerals.) The computing world followed suit by plastering "Y2K-compliant" stickers on everything it sold this year. Not every company could make this claim, though. Microsoft's much-vaunted Windows 98 needed an urgent update in early December to fix "a few minor problems" with the millennium calculations. These included flaws in Microsoft Wallet (an e-commerce tool), the Phone Dialer's log, Date/Time's handling of leap years, Microsoft Foundation Class Library (the supporting object code for innumerable Windows applications), and the Xcopy utility. Windows 98's Java Virtual Machine also had problems, but Microsoft pinned the blame for that on Sun Microsystems.

However, millennium fever proved to be a great promotional tool. Salt Lake City–based Perma Pak Foods ("helping rabbits as "If life is a process of discovering who we are, Y2K is when we find out." Few of the essays, such as "From Chaos to Coherence: The Emotional Challenge of Y2K," were written by computing experts.



Why is this Web site laughing? For a mere $1,000, the Richard Nixon Library & Birthplace Foundation (www.nixonfoundation.org) offers The President's Council membership, which includes a handsome RN pin, The White House Family Cookbook, Pat Nixon: The Untold Story, *your corporate name enshrined on the White House Circle Honor Wall in the Library's Reception Lobby, a set of official lapel pins, an autographed print of Charles Wysocki's painting,* The Young Nixons, Home Sweet Home, *and complimentary tickets to a special VIP event featuring "a prominent national or international figure."*

Not to be outdone, computer publishing giants Ziff-Davis Publishing, clnet, and International Data Group all registered Internet domain names devoted to extending the panic by whistle-blowing on companies and government agencies that don't have Y2K fixes in place. Thousands of COBOL programmers found their formerly redundant skills in demand again. And Pat Boone found that becoming a spokesperson for the Year 2000 National Education Taskforce (**www.y2knet.com**) worked wonders for boosting traffic to his official Web site (**www.patboone.net**).



Would you buy a Y2K fix from this man? Pat Boone, Y2Knet's spokesperson—and leading interpreter of Little Richard—brings Y2K consciousness to the blue-haired crowd.

Year 2000 Predictions

Just how bad is the Y2K problem? Thanks to in-depth polling, massive database scanning, and checking the Sunday papers, we've unearthed the true breadth, width, and depth of the problem. In no particular order, these are the biggest Y2K concerns.

- 2000 will be a leap year, and most Y2K efforts don't address the February 29, 2000, problem.
- Toilet paper supplies will run out.
- At the end of the year, radio stations playing Prince's "1999" will reach epidemic proportions.
- A record-breaking earthquake will level Tokyo. Or a giant, fire-breathing lizard will.
- Plagues, diseases, and pestilence will sweep the country. Or Al Gore and Bill Bradley will induce nationwide narcolepsy during their debate.
- Since there are 1024MB in a gigabyte, but many PC makers call it an even 1000MB, the real problem will come in 2048.
- By July 1999, money supply worries will cause a run on the banks.

Continued on page 20

Just Shoot Me!

The year in quotations

I Also Brought Peace to the Middle East

"The PC became the NC. I'll be remembered for bringing down the price of a PC."

—Larry Ellison, CEO of Oracle

would have addressed. President Nixon was very suspicions of computers, though, and wouldn't sign off on it. Without his proclamation we couldn't do it. I think he'll go down in history along with King Canute."

—Bob Bemer, codeveloper of COBOL

It Just Breaks Down More

"There are more than twice as many opportunities for Windows-based computer services careers in America than there are for jobs focused on the combined proprietary technologies of IBM, Novell, Oracle,

Let's pie the polluting lolly!'"

—Noel Godin, Belgian filmmaker who threw pies at Bill Gates

Ain't Nothin' Like the Real Thing, Baby

"Maybe the band and I could just

becor , the most respected, and
most ıable, company on earth."
—Steve Case, CEO of America Online, in Wired News

Someone Get Me Fact Checking!
"The era of the PC is over."
—Lou Gerstner, CEO of IBM

Someone Get Me Fact Checking, Part Two!
"There was no such thing as the Internet five years ago."
—Neil Herman, Salomon Smith Barney technology analyst

Drink My Kool-Aid
"People are guaranteed to get results if they develop a Web site with the methods I propose. I am going to be a guiding light."
—Jakob Nielsen, Sun engineer turned user interface consultant

Blame It On Nixon
"I proposed a national computer year back in 1970 ... The year 2000 [problem] was just one of the issues we

Pass the Year 2000-Compliant Salt
"I want to bring Y2K to the family dinner table."
—Pat Boone, spokesperson of the Year 2000 National Education Taskforce

L'Internet, C'est Moi
"We are the best example of how the Internet is going to change everything."
—John Chambers, CEO of Cisco

$ = MC^2
"Einstein would have put his stamp of approval on everything we've done."
—Robert Freeman, vice president of Silk Road, an optical networking start-up

Le Portal, C'est Moi
"A portal is a search engine trying to be AOL. We're already AOL."
—Barry Schuler, AOL

The Only E-mail Humor of the Year Worth Repeating
"When John Glenn returns from space, everybody dress in ape suits. We have nine days in which to bury the Statue of Liberty up to her head."
—Author unknown, November 2

Bill Gates

Same Old Stuff, Just Cooked Longer
"I'm not supposed to tell you this, but it's just our regular house blend left in the roaster a little longer."
—Café Espresso employee describing Borders' Windows 98 coffee, officially described as an "Indonesian and South American Arabica coffee bean blend"

My Job Is Degrading
"My job is not to compete with Microsoft. It's to lower the value of the operating system market."
—Bob Young, whose Red Hat Systems is the main commercial supplier of Linux

My Family Knows All About Subjugation
"Computers should be the slaves of children, not the other way 'round."
—Princess Anne

Pie Our Square
"Bill Gates was at the top of our list of victims. The attack against him is symbolic; it's against hierarchical power itself. Our war cry was explicit: 'Let's pie!

the live audience the Internet experience."
—Victoria Williams, who performed at Intel's New York Music Festival

I Think, Therefore I BS
"The Internet is the great democratizer; it's about what I think, not about what the media thinks."
—Josh Quittner, editor of Time Daily

Just Call Me Albert Schweitzer
"Money is not my measure of success. I want my epitaph to read 'He made a cultural impact.'"
—David Talbot, editor in chief of Web-based magazine, Salon

Cures All Ills, but Keeps On Crashin'
"Instead of letting the cancer patient die, we have a cure, and the cure is Windows."
—Microsoft executive Tod Nielsen, countering Justice Department lawyer David Boies' statement, "What Microsoft is saying as a defense is, if somebody shoots you, they can defend that by saying you had cancer."

Continued from page 19

• Paper money will lose value, with barter and exchange of gold and silver taking the place of modern commerce.

• Biblical scholars point out that Jesus was actually born in 6 B.C. Apparently, developers of the Gregorian calendar used flawed Pentiums to calculate the crossover year between B.C. and A.D., so it's actually a year 2006 problem.

As yet, no Y2K+16 task force has been announced, but we feel confident that Pat Boone will be there for Americans when it is.

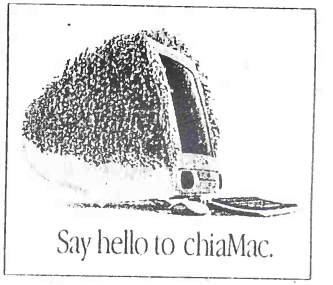
I Do Not Like That, Spam-I-Am

In other news, 1998 saw the end of the Spam King's reign. Back in 1997, Sanford Wallace was cheerily invading every e-mail box in the world with cunningly crafted pitches on behalf of his paying clients. In 1998, he officially retired, but unwanted Internet-based advertising continues. Widget vendors looking to drum up trade online can now turn to Alexa. The company, which provides the data for Navigator 4.x's What's Related feature, is charging hefty sponsorship fees for two links in the list. If that approach doesn't appeal, there's always the Goto.com search engine, which will put your vitamin supplement Web site at the top of its results page for a fee.

For those who yearn for the TV experience online, Zing touts a technology that displays "entertainment" (like music clips or flash cards in French) along with advertisements, while you wait for Web pages to download. One thing in Zing's favor is that the ads are only 10 percent of the mix, about half that of commercial TV.

Spam will survive any Y2K problems—until you open the can.

Hotwired



The darling of Apple Computer and Madison Avenue reminded Web pranksters of another miracle of marketing. Just add water and plug into the wall. There is no third step.

The Lowest Prices Guaranteed!

NEPTUNE COMPUTER CORPORATION

OUR COMPUTER SYSTEMS

All systems include:-
Fully Upgradable Motherboard
32MB Ultra Fast 100MHz SDRAM
2MB SVGA PCI Video Card
4.3GB Hard Disk Drive
CD-ROM Drive
16-Bit Sound Card
14" SVGA Monitor 0.28
Mitsumi Keyboard and Mouse

The Prices:-	
Pentium MMX-233	$619
Cyrix MII-333	$599
AMD K6-2-300/333	$599/619
AMD K6-2-366/400	$669/749
Celeron 300/333	$629/649
Celeron 366/400	$699/769
Pentium II 350/400	$749/849
Pentium II 450/500	$949/1299
Pentium III 450/500 Katmai	Call

Options:-	
64MB SDRAM Upgrade	$19
128MB SDRAM Upgrade	$159
6GB Hard Drive Upgrade	$29
12GB Hard Drive Upgrade	$129
Diamond Stealth 3D	$35
Zip Drive	$79
DVD-ROM Drive Upgrade	$59
TR-4 8GB Tape Drive	$199
SoundBlaster 128 PCI	$69

Mini Tower Case
200W Power Supply
Dual Pentium II ..... From $999
Dual Pentium II Xeon ..... From $1699
Please visit our web site for more details
15" Monitor Upgrade $19
Super Mini Tower Case Upgrade $9
Many more options available - check web

OUR COMPUTER COMPONENTS

Motherboards
Cyrix MII-300/333 ..... $129/169
AMD K6-2-300/333 ..... $159/179
Pentium MMX-233 ..... $159
Celeron 266/300 (32K) $159/169
Celeron 300/333 (128K) $209/239
Pentium II 333/350 ..... $299/349
Pentium II 400/450 ..... $499/699
Dual Pentium II 440LX (No CPU) $119
Dual Pentium II 440BX (No CPU) $199
Dual Pentium II Xeon ..... Call
Quad Pentium II Xeon ..... Call

Memory
32MB SDRAM DIMM $45
64MB SDRAM DIMM $89
128MB SDRAM DIMM $169
ECC and PC100 SDRAM DIMM ..... Call
HP LaserJet Memory ..... Call

PCI Video Cards
S3 2MB DRAM $18
Diamond Stealth II S220 4MB $49

AGP Video Cards
Intel I740 8MB $49
Diamond Stealth G460 8MB $69
Matrox Millennium G200 8MB SDRAM $99
Diamond Viper V550 16MB $179

Other Cards
OPTI Sound Card $11
Sound Blaster 16 PnP $26
Sound Blaster 16 PCI $31
Sound Blaster 64 AWE $45
Sound Blaster 128 PCI $59
Adaptec 2940UW PCI SCSI Card $169
Lucent 56K PCI $35
Supra 56K PCI V90 ..... $55
US Robotics 56K $85

Disk Drives
8GB EIDE Hard Drive $169
12GB EIDE Hard Drive $239
32x CD-ROM Drive $39
DVD-ROM Drive $69
1.44 Floppy Drive $18

Monitors
14" SVGA Monitor 0.28 ..... $109
15" SVGA Monitor 0.28 ..... $129
17" SVGA Monitor 0.28 ..... $219
19" SVGA Monitor 0.26 ..... $139

Other Items
Mitsumi Keyboard $12
Microsoft Natural Keyboard $29
Bob Mouse $5
Logitech Mouse $14
Microsoft IntelliMouse $23
Super Mini Tower Case $32
Mid Tower Case $39
Full Tower Case $49
ATX Mid Tower Case $59
TR-4 8GB IDE Tape Drive $199
Iomega Internal IDE Zip Drive $69
140W Speakers $19
320W Speakers $39
Subwoofer $79
Condenser Microphone $5

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http://www.buycomputer.com

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Despite a pack of handheld computers running Windows CE, the real top dog was 3Com's PalmPilot line. The PalmPilot seems to do everything people want and it *doesn't* do it with Microsoft software—a double boon. In fact, one Palm software developer even programmed the PalmPilot's infrared port to act as a universal TV remote control. Better yet, users in the UK discovered that the PalmPilot could also record the code on infrared automobile security systems. If you played back the code with your PalmPilot, you could pop open a Chrysler or Mercedes and disable its alarm system. A PalmPilot spokesperson, quoted in *New Scientist*, saw the bright side of this unexpected boon for car thieves. "Say someone wanted … their car code stored in their PalmPilot, just in case they forget their keys."

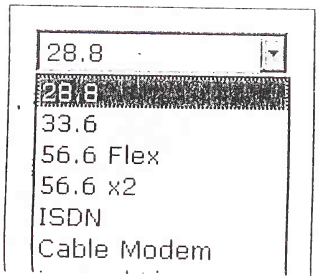
It's unclear whether that spokesperson will survive the year 2000 transition in her current job.

America—and Australia—Online

1998 was a banner year for America Online, and it has the invoices to prove it. As part of its spend, spend, spend policy, the company sank more

than 4 billion dollars into acquiring Internet businesses ICQ and Netscape. And at the beginning of the 1998 holiday season, it ran the longest and most expensive ad in history: the Meg Ryan/Tom Hanks movie, *You've Got Mail*. Ignoring verisimilitude, these keyboard lovers never misspelled a word, much less encountered busy signals or dropped lines.

In a further attempt at world domination, AOL went down under, adding Australia, along with Europe, to its fold. (The service still goes by the acronym AOL everywhere outside of the U.S.) Has AOL gotten a swelled head? No way, mate, although some sign-up CD-ROMs do note they hold "the entire Internet plus more, exclusive content."



Instead of ushering users to other companies' sites, why not drown the search engine in news tickers, Web-based e-mail, weather reports, TV listings, and other "content," so that visitors will stick around?

The plan paid off, drawing money from advertisers and corporate suitors. Disney bought a huge stake in Infoseek. NBC invested millions in cnet to get a piece of its portal, Snap.com, and Lycos bought HotBot and Wired.com, thereby becoming two portals at once.

Source for the Goose

Netscape's browser steadily lost market share to Microsoft's Internet Explorer in '98, despite the Department of Justice's best efforts. Clearly, drastic measures were called for. So Netscape threw in a bonus along with its free Communicator 4.5 suite: You could download the suite's source code for free, too.

But Linux and other applications really turned Open Source Software (OSS) into front page news in 1998. If you believe reports forwarded to the Open Source site (**www.opensource.org**) from a supposed Microsoft insider, it has Microsoft piddling in its Dockers.

The so-called Halloween documents

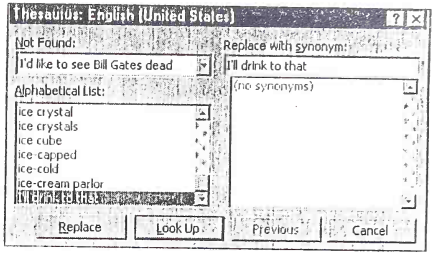
Online bought the company. Microsoft lawyers then held that the newly merged companies were a second online superpower to rival Microsoft. That's when some states considered dropping their antitrust lawsuits. (For more on Microsoft's 1998 adventures, see "Microsoft's 1998 Timeline" at **www.currents.net/covr**, where you'll also find the sidebar, "The 1998 What Were You Thinking? Awards.")

The open source Netscape browser crew, residing at **www.mozilla.org**, remains unimpressed by the Netscape/AOL merger. As the hacker-in-chief of the project, Jamie Zawinski, commented at his site, "Mozilla.org is not Netscape. And it is not now, nor will it ever be, AOL." Now that's what journalists call an open source.

Comeback of the Year

Apple Computer snatched itself from the jaws of defeat (again) in '98. After pulling the plug on the eMate—the cute, translucent $600 laptop it

a live, Web-based broadcast of a woman giving birth. The spectacle drew a record-breaking half-million online viewers and tripled demand for the RealVideo player overnight. The child's father was featured on America



It's not exactly an Easter Egg: Type in this phrase in Word 7.0 or Word 95 and you get this cheery suggestion. Skol!

Online's AOL Live chat on Father's Day the following week.

In an attempt to cash in, a shrewd businessman named Ken Tipton began promoting a prequel of sorts called Our First Time, a Web site where all-American teenagers Mike and Diane would supposedly yield their respective virginities to each other. (An event unlikely to match the six-hour duration of the live birth.) The proposed deflow-

L ...sed Line
Courier Pigeons

Forget DSL and T1. One ISP (via ISPcheck.com) knows how to deliver bandwidth!

What's the secret of AOL's success? Hyperbole? Cranky phone lines? Steve Case's cute-as-a-button pageboy haircut? Mais non! "It starts with e-mail," says Barry Schuler, president of AOL Interactive Services at Internet World in June. "Then you get them interested in a buddy list, so they can find their friends and family." After that, you presumably move them on to hard drugs and really start charging.

Any Portal in a Storm

In 1998, search engines finally called it quits and decided that their new, politically correct name should be portal. The reasoning was that if a search engine does its job right (no laughter, please), it should deliver what you want within the first two results screens, pointing you to the desired site.

For an advertising-driven medium, though, sending users away didn't make much sense. Enter the portal concept.

(**www.opensource.org/halloween.html**) include a technical report on OSS by a Microsoft engineer, complete with commentary from other Microsoft employees, describing OSS as "a direct, short-term revenue and platform threat to Microsoft," with benefits that "present a long-term developer mindshare threat." The documents talk about tactics for crushing Open Source competition, whining that fear, uncertainty, and doubt (FUD) won't work this time. "OSS is long-term credible ... FUD tactics cannot be used to combat it."

In the short term, OSS may prove to be helpful to Microsoft. Shortly after Netscape took up the idea, America



Illustration © 1998 by Peter Georgeson. From *Bill Gates' 99 Paper Doll Book*. **www.beckermayer.com**

introduced last year—the company needed a headline-grabbing computer. It found one in the translucent iMac, which looks like a wedge of cheese with a keyboard attached—a design so distinctive that it's easy to overlook little details, like the absence of a floppy drive or SCSI ports. The ad blitz for the iMac ran the gamut from the usual sniping at PCs (as an acronym for "perpetually complicated," "profusely corded," and so on), to celebrity endorsements (Jeff "Brundlefly" Goldblum elatedly describes how he "joined the party" online).

The iMac's real advantage lies in product placement, a fact that Apple didn't miss. By December, an iMac appeared on Laura San Giacomo's desk in the TV series, *Just Shoot Me*. This advantage could be short-lived, however. PC maker eMachines has already released fully configured 300MHz PCs for a mere $499, sans monitor. And it has a built-in floppy drive.

Live Birth, Live Sex

This year, streaming Web video turned from a trickle into a torrent. On June 16, America's Health Network Web site (**www.ahn.com**) used RealVideo for

Continued on page 22

Most Popular Names Among High-Tech PR Reps

In ascending order by sex ...

Kate/Cathy/Kathy/Catherine/Katherine
Sue/Susan/Suzie/Susie/Suzanne
Jennifer
Mary/Maryanne
Pat
Amy
Kimberly
Kirsten/Kristen/Kristine/Kris
Michelle
Debbie/Deborah
Lisa/Lesa/Lysa

Dave
Mike
Dan
Bill
Jeff
Steve
Bob

The Computer Currents 1998 Harpy's Index

Number of pies thrown at Bill Gates by Belgian dadaist Noel "Le Glonpier" Godin and his gang: 25

Number of pies that connected with Gates' face: 4

Number of pies thrown at San Francisco Mayor Willie Brown by the Biotic Baking Brigade: 3

Number of pies that connected with Brown's face: 3

Dollars spent by America Online to purchase ICQ in June: 287 million

Dollars spent by America Online to purchase Netscape in November: 4.3 billion

Increase (in dollars) of America Online's monthly access fee: 2

Cost of a 2.1GB SCSI-2 hard drive in December 1996: $485

Cost of a 2.1GB SCSI-2 hard drive in December 1998: $130

Number of workers laid off during SyQuest's bankruptcy restructuring: 950

Average number of hours tech support representatives spend each day answering calls: 5.5

ering generated outrage from the expected quarters, quickly followed by the news that the "teenagers" were a couple of out-of-work actors in their twenties and were unlikely to be doing anything for the first time. Tipton backpedaled furiously, called the whole thing off, and posted the shooting script he had written, which revealed a surprise: The camera would swing away before anything happened and zoom in on Tipton, who would deliver a monologue about abstinence and true love.

It wasn't until a certain special prosecutor released a report about a certain Leader of the Free World that Web surfers could finally get their kicks. The posting of the Starr report online flooded the CNN site with visitors—340,000 requests per minute at its peak. By the time Clinton's videotaped testimony appeared, Net frenzy hit a new high (or is it

ington Post reported that the online copy (originally written in WordPerfect) contained deleted footnotes that weren't in the printed version. Apparently, converting the document to HTML removed the Delete tags. Deleted information included Monica Lewinsky's speculation about President Clinton's relationship with journalist Eleanor Mondale.

The Clinton administration may not be compliant with 2000—or with 1999.



Illustration © 1998 by Peter Georgeson. From *Bill Gates 199 Paper Doll Book*. www.beckermayer.com.

Pentium II. The idea was that people would vote for their favorite (or least favorite?) bunny, and the one that garnered the most votes would be revealed before the end of the game. Several thousand votes and cases of beer later, the culprit was revealed. Reports vary, but the villain was apparently a Budweiser frog.

In spite of the PR blitz, Intel had to face reality—the Pentium II was too darned expensive. Accordingly, the Lords of Silicon introduced a low-cost chip, called the Celeron, to cash in on the sub-$1,000 PC craze (later known as the sub-$800, -$700, -$600, and -$500 PC crazes). The trouble was that the first Celerons were cheap in every sense of the word, creeping like snails because they lacked any cache. Several system manufacturers suckered into purchasing these first chips refused to send their Celeron-based PCs out to publications for review.

To make things worse for Intel, Bill Gates publicly accused the company of developing substandard code during an antitrust hearing. Clearly, Microsoft wanted a monopoly on substandard programming.

However, Intel rallied in the last half of the year by taking a leaf from the

Percentage of tech support problems solved on a first call: 50

Average length of employment for tech support representatives, in months: 15

Dollar amount reportedly paid by Compaq for the domain name **www.altavista.com**: 3.35 million

Percentage of connections to the *Seinfeld* Web site that failed during the show's last episode, according to Keynote: 20

Percentage of U.S. PC owners with Pentium or faster processors: 50.2

Percentage of U.S. home PCs with 28.8Kbps or faster modems: 48.7

Dollars shaved from Bill Gates' net worth during stock market dip on August 31: 5 billion

First day's audience for America's Health Network's Web broadcast of a woman giving birth: 560,000.

First day's audience for RealVideo Web broadcast of Clinton's videotaped testimony: 2 million

Number of days between widespread news coverage of Our First Time live sex site and discovery that it was a hoax: 2

Number of words in Amazon.com's press release addressing criticisms from Barnesandnoble.com: 1 (The word was "Oh")

a new low.), with 2 million viewers tuning in during the first day.

It took an icon from the 1960s to really send Net viewership figures through the roof. (And it wasn't Pat Boone.) Just before astronaut–senator–Tang-achiever John Glenn was shot into space, CNN's servers handled 494,000 hits per minute, 45 percent more than their previous record. The picture was tiny, fuzzy, frequently dropped, and had dreadful sound quality—just like the TV broadcast of the first time Glenn went into space.

In 2000, John Glenn is scheduled to turn 79.

You Can Delete, but You Can't Hide

In July, the *New York Times* exposed a problem with Microsoft Office 98 for the Mac. Some files created with Office 98 contained data from previously deleted versions that, while hidden from Word users, was clearly visible when opened in another word processor. After several weeks, the company made a bug fix available for download. But hidden text problems reared their heads again when the Starr report was posted online in September. The *Wash-*

Where's the Remote?

San Diego–based software company NetPartners calculated that making the Starr report available online cost U.S. businesses millions of dollars. The company estimated that half of the 27 million downloads were performed at work. Reckoning that an average employee costs a business $35 per hour and that it took an hour to download the file on the nation's overloaded Net, the lost productivity totaled more than $470 million. By the way, NetPartners makes software that prevents employees from accessing unauthorized Web sites.

Intel Goes Ballistic

Even before the retirement of leader Andy Grove, Intel's year took some interesting turns. Grove made the cover of *Time*, accompanied by an adulating article about his rags-to-riches life. The company also backed *One Digital Day: How the Microchip Is Changing Our World*, Rick Smolen's unwitting paean to most things Intel. To top it off, Intel ran an interactive Superbowl TV ad that had viewers guessing which of three clean room workers had stolen a

open source code movement. It granted a royalty-free license to the U.S. government to develop a radiation-proof Pentium processor for use in spaceships, satellites, and military equipment.

By taking Intel up on this offer, the government increased the processing power of its ballistics systems and shaved millions off its budget, too. At the same time, it guaranteed that the Feds would distribute Windows into a formerly untapped market: outer space. This leads us inexorably to 2001, which will be next year's big thing.

"Open the pod bay door, HAL."

"I'm sorry, Dave. But there's a General Protection Fault in module KRNL32.EXE." ★

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Morgan Frew's source code is available for download from **www.currents.net/covr**, *but it can't legally be modified. He has been certified Y2K compliant by an independent testing authority.*

Go to **www.currents.net/covr** *to find this article on our Web site.*

SunExpert Magazine
Circ – 92,308
Monthly

FEBRUARY 1999

URL/New Products

Content Management Software Service

United Research Laboratories has announced Version 3.0 of its I-Gear Internet content management software. I-Gear reportedly allows network administrators to establish unique Internet access permissions for individual users and computers, or groups of users and computers, across a network. Permissions can be based on identity, location or time of day. In addition, I-Gear provides for user-transparent auditing of unfiltered access, as well as detailed summary reports that can be used to pinpoint policy violations without restricting access, United Research says.

I-Gear 3.0 features a common object-oriented interface across all platforms, the ability to create virtual user accounts and multithreaded execution for increased efficiency and reliability. It is available for Solaris and Windows NT platforms and operates on any network running Check Point FireWall-1 from Check Point Software Technologies Ltd. Pricing for I-Gear starts at $2,495 for a 50-user simultaneous license. URLabs also offers a revenue-sharing program to Internet service providers (ISPs) that resell I-Gear and Mail-Gear software to subscribers.

Unified Research Laboratories Inc.
303 Butler Farm Road, Ste. 106
Hampton, VA 23666
http://www.urlabs.com
Circle 202

Speed Up CGI Scripts

Binary Evolution has announced an upgrade to VelociGen, its Web server plug-in, which is said to increase the performance of Web sites that depend on Perl as their scripting language. VelociGen 1.1 runs on several UNIX platforms, including CGI-compatible Mosaic, which needs no CGI scripts without modifying existing code. Embedded Mode, which allows developers to mix Perl and Tcl code within an HTML page, and Persistent Mode, which precompiles and caches scripts for maximum speed.

Binary Evolution has also announced VeloMeter, a load-testing tool that measures server speed under various user loads. VeloMeter is said to help quantify the benefits VelociGen offers and helps justify its purchase.

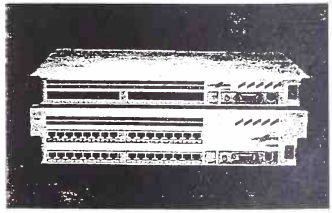
VelociGen installs on Solaris, IRIX, HP-UX, AIX and Linux platforms, as well as Windows NT for Intel. Supported Web servers include Netscape Communications Corp. FastTrack Enterprise Server, O'Reilly & Associates Inc. Web-

Thin Servers from Lantronix

Lantronix has announced one new thin server and three new terminal servers aimed at Ethernet networks. The MSS100 microthin server provides a serial-to-Ethernet conversion for environments supporting 10-Mb/s Ethernet and 100-Mb/s Fast Ethernet via a 10/100-RJ45 Ethernet interface with autosensing/autonegotiating capabilities. A DB-25 serial port with throughput of up to 115 Kb/s and full modem control is complemented by concurrent support of TCP/IP, IPX, AppleTalk and NetBIOS/NetBEUI, Lantronix says. Support for Digital Equipment Corp.'s Local Area Transport (LAT) is also available for an additional fee.

Also included with the MSS100 microthin server is Lantronix's redirector software, which allows network-based PCs to access the MSS serial port as if it were connected directly to the PC, the company says. Operating software resides in the Flash ROM, which may be updated for free. The MSS100 costs $499.

Lantronix has also unveiled the ETS32PR and ETS16PR terminal servers (featuring 32 and 16 serial ports, respectively) for networks needing higher port density, and the ETS4P terminal server model, which provides a combination of four Centronics parallel ports and four RJ45 serial ports for added flexibility in connecting terminals and other peripherals to one or more host computers on an Ethernet network. Installation



of the servers is simplified by the company's EZWebCon software, a GUI that enables administrators to manage the server via a Web browser or DECnet login, Lantronix says.

The ETS32PR, ETS16PR and ETS4P cost $2,995, $2,195 and $1,195, respectively.

Lantronix
15353 Barranca Pkwy.
Irvine, CA 92618
http://www.lantronix.com
Circle 201

Site Pro, Microsoft Corp. Internet Information Server (IIS)/Personal Web Server (PWS) and any other ISAPI-compatible Web server. Pricing ranges from free for noncommercial Linux applications to $4,999 for commercial UNIX platforms.

Binary Evolution Inc.
P.O. Box 3258
Rancho Santa Fe, CA 92067
http://www.binaryevolution.com
Circle 203

Enhanced Web Search Software

Infoseek, operator of the popular search engine site, has upgraded its Ultraseek Server navigation application. Several enhancements have been made to the product, including support for documents created in eXtensible Markup Language (XML), as well as the ability to manage indices and URLs on mirror sites. In addition, Infoseek has added support for Secure Sockets Layer (SSL) encryption, which enables Ultraseek to find documents served via HTTPS. The company has also added language support for Swedish, Danish, Finnish and Norwegian. Ultraseek runs on Solaris 2.5+ and Windows NT 4.0. Administrators can manage the software through Netscape Communications Corp. Navigator 3.0+ or Microsoft Corp. Internet Explorer 3.0. Pricing starts at $995 for a 1,000-document site or $4,995 for a 10,000-document site.

Infoseek Corp.
1399 Moffett Park Drive
Sunnyvale, CA 94089
http://info.infoseek.com
Circle 204

XML Business Forms Builder/Viewer

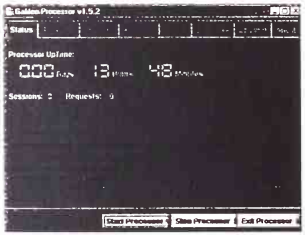
InternetForms Viewer 4.0.4 Gold and InternetForms Designer 1.1.1 Gold are the latest offerings from UWI.Com. InternetForms Viewer 4.0.4 Gold is designed to allow users to view, complete and submit eXtensible Markup Language (XML)-based documents from within a Web browser. It offers internal logic and computations, enclosures and context-sensitive help, the company says. InternetForms Designer 1.1.1 Gold is said to allow users to create complex Web-based forms in a drag-and-drop environment without having to learn XML syntax. Both products support eXtensible Forms Description Language (XFDL), an open, XML-based protocol for creating, completing and distributing business forms.

InternetForms Viewer costs $119 per seat for corporate users, or $3,500 for public Web site use. InternetForms Designer costs $1,495.

UWI.Com
2300 Clayton Road, Ste. 1590
Concord, CA 94520
http://www.uwi.com
Circle 205

Platform-Independent Java Application Server

Esemplare Development has released Galileo 1.5. Galileo is a fully scalable, platform-independent application server, which is said to allow developers to create database-driven Web applications using custom HTML tags. It has been designed to simplify the design, development, deployment and maintenance of Web-based applications, Esemplare says.



Written in Java, Galileo runs on any server supporting Java servlets. It comprises three components—a servlet, dispatcher and processor—and can be downloaded for free from the company's Web site.

Esemplare Development
32 Monsey Place
Staten Island, NY 10303
http://www.esemplare.com
Circle 206

Customized Web Content

Web site designers can now use Jio, the latest software offering from iDream Software, to create online catalogs that reportedly allow site visitors to gather products of interest into one area and then mix, match and compare them.

Jio creates Java-based applets that act as an Internet storefront and features a full set of components for creating and customizing content. The applets run in any Java-enabled browser, the company says. In addition, Jio comes with 110 customized templates so users can select a catalog style that is compatible with their Web site and includes JPEG, GIF and Meta file support. The content authoring component of Jio runs on Windows 95/98/NT. Java Run-Time environment 1.1.6 is required for Web deployment of the catalog applets. A single server license costs $14,995.

iDream Software LLC
18939 120th Ave. N.E., Ste. 111
Bothell, WA 98011
http://www.idreamsoftware.com
Circle 207

Open-Source Application Server

Hamilton, a Java-based Web application server, is currently available as open-source software from Microstate. Because it's the first application server to be released to developers, Hamilton fills a real need in the open-source software community, the company says.

Microstate sees Hamilton being used by any software development organization that needs an application server for thin-client, Web-based business applications, especially those that pool data from diverse, heterogeneous information sources such as databases and wire feeds. Hamilton can be downloaded free of charge from the company's Web site.

Microstate Corp.
11166 Main St., Ste. 100
Fairfax, VA 22030
http://www.microstate.com
Circle 208

Continental Site Analysis

If you want to track the number of hits your Web site receives from the South Pole, then Active Concepts Funnel Web 2.5 just might help. This latest release offers new reporting features based on geographic regions and traffic paths through a site. Active Concepts has also added domain aggregating, offsite processing and additional operating system support.

a brief highlight of the information in the other three panels. Alexa 3.0 can be downloaded for free from the company's Web site.

Alexa Internet
P.O. Box 29141
San Francisco, CA 94129
http://www.alexa.com
Circle 213

Cryptographic VPN System

CellCase2 is the latest addition to Celotek's (formerly Secant Network Technologies) cryptographic product line. Positioned as a virtual private network (VPN) system, CellCase2 is designed to secure data traveling over Asynchronous Transfer Mode (ATM) networks via T1 or E1 data rates, the company says.

With CellCase2, data (including multimedia files) can be securely transmitted over public switch telephone networks, Celotek says. The company touts this as an alternative to using a leased line or creating a private network. CellCase2 offers strong cryptography with Data Encryption Standard (DES), triple DES, Electronic Code Book (ECB) or counter mode data encryption, as well as Rivest-Shamir-Adleman (RSA), Message Digest 5 (MD5) and triple DES key management. Celotek has received approval from the U.S. Department of Commerce to export 168-bit triple DES encryption (without key recovery) to the banking industry. CellCase2 costs $17,500.

Celotek Corp.
P.O. Box 14235
Research Triangle Park, NC 27709
http://www.celotek.com
Circle 214

Create Sophisticated Storefronts

With iHTML Merchant 2.0 from Inline Internet Systems, Internet service providers (ISPs), Web developers and business owners can now deploy sophisticated online storefronts complete with shopping baskets, product catalogs, store search functionality, banner ad management, sales reports, customer management, shipping calculations, product style handling, electronic software distribution support and a fast ordering process, the company says.

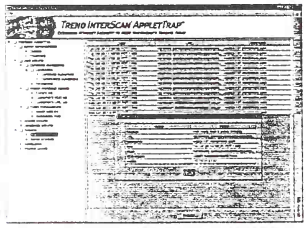
The product supports several transaction payment systems, including CyberCash, IC Verify, PC Authorize, Authorize Net, Internet Secure and Redi-Check. iHTML Merchant is built using Inline's iHTML programming language and can be customized with open-source access to the store software. A Web browser creation and management interface is also available for novice users.

iHTML and iHTML Merchant run on Solaris, Linux, BSD, FreeBSD and Windows via Apache, O'Reilly & Associates Inc., Netscape Communications Corp. or Microsoft Corp. Web servers. Pricing starts at $739. Upgrades from Version 1.0 cost $149.

Inline Internet Systems Inc.
7305 Rapistan Court
Mississauga, Ontario
Canada L5N 5Z4
http://www.inline.net
Circle 215

Tool to Trap Malicious Code

Trend Micro's InterScan AppletTrap is designed to stop malicious JavaScript applets and ActiveX objects at the Internet gateway before they can access and/or damage files on a user's desktop.



AppletTrap, which runs on the server, has three levels of security: certificate verification, a filter to identify known malicious code and a security monitor that checks an applet's behavior against corporate security policy. When a user attempts to download an applet or ActiveX object, the object's digital certificate is compared to a list of allowed certificate publishers, as well as a database of known malicious code. If an applet is found to be malicious, or has come from an unapproved source, it is blocked and an alert is sent to the user, the company says. Applets and ActiveX objects that are allowed to progress to the user's desktop are monitored for suspicious behavior. If an applet violates security policy, it is either automatically shut down or the user is given the choice of whether or not to allow it to continue (the network administrator can decide how much override control to give end users and can set different policy rules for different users and groups).

In addition, AppletTrap provides a log of system events so an administrator can track malicious applet activity and modify security policy accordingly, Trend Micro says.

AppletTrap runs on Windows NT 4.0, as well as any UNIX platform equipped with a Java Virtual Machine (JVM). However, it can only block—not selectively filter—ActiveX objects when running on UNIX. For full functionality, the company recommends running it on a Windows NT server. Pricing for AppletTrap starts at $600 for 25 users.

Trend Micro Inc.
10101 N. DeAnza Blvd., Ste. 400
Cupertino, CA 95014
http://www.trendmicro.com
Circle 216

Module to Parse XML Documents

Perl, the language behind many dynamic Web sites and eXtensible Markup Language (XML) can now be used with a new Perl module from O'Reilly & Associates. XML::Parser reportedly provides Perl developers with an efficient way to break down and process XML document parts. Developed in part by Perl creator Larry Wall, XML::Parser is based on the expat C library (expat, like Perl and XML, is Unicode-aware and is reportedly very fast). On the Windows platform, XML::Parser is available as part of the ActiveState ActivePerl development package from ActiveState Tool Corp. XML::Parser is available free of charge to UNIX developers from the Comprehensive Perl Archive Network (CPAN) Perl site.

O'Reilly & Associates Inc.
101 Morris St.
Sebastopol, CA 95472
http://www.oreilly.com
Circle 217

Entrepreneur's Home Office
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Circ – 150,000
Bi – Monthly
FEBRUARY 1999
Bacon's

BY BRONWYN FRYER

Our guide to what's new, what's hot, what's helpful on the Web

False Alarms

WHEN YOUR brother-in-law sends you a dire warning about a new computer virus circulating on the Internet, he's doing you a favor, right? Wrong.

Believe it or not, many of the friendly warnings about viruses that threaten to bring our computers to their knees can wreak nearly as much havoc as the viruses themselves.

So-called "virus hoaxes" are just that: imposters, mere rumors or nonexistent computer viruses. Circulated over the Internet in the same way real viruses are, virus hoaxes are really just messages designed to strike fear into the hearts of computer users everywhere. And as is the case with true viruses, the people who create them are merely out to stir up mischief.

According to the Computer Incident Advisory Capability, the U.S. Department of Energy's response team, virus hoaxes and their first cousins, e-mail chain letters, "cost millions of dollars annually in time spent by countless people diverted from productive work, resources devoted to virus detection and defense, and bandwidth utilized that floods the Internet with useless and harmful e-mail."

David Schairer, vice president and chief systems architect at Concentric Network Corp., an ISP in Cupertino, California, says virus hoaxes have done more damage in time wasted and overall angst than the real viruses out there.

How do you identify a virus hoax? Telltale signs include a warning that your hard drive will be destroyed if you download something from the Internet, and an exhortation to "send this message to all your friends."

To learn more about virus hoaxes, check out the following Web sites:

- "Charles Rivmes' Don't Spread That Hoax," www.nonprofit.net/hoax/hoax.html
- Computer Incident Advisory Capability, http://ciac.llnl.gov/ciac
- Computer Virus Myths, http://kumite.com/myths
- Police Notebook of Virus Hoaxes, www.ou.edu/oupd/vnoac.htm

To protect yourself against real viruses, purchase and load a good software utility such as Norton AntiVirus. (For more information on Norton AntiVirus, see "Hot Disks" on page 22.)

Finally, if you suspect a message sent to you is really a virus hoax, don't pass it on. Just hit the "Delete" button—and tell your brother-in-law to hit his, too.



I'll Take You There

MOVE OVER, Navigator and Explorer. A freeware called Alexa (www.alexa.com) is the coolest browser-booster around. As you surf the Net, Alexa—which appears as a tiny toolbar at the bottom of your screen—helps steer you to where you should go next. As you settle on a Web site, it lists



ILLUSTRATIONS © BRAD HAMAKER

related sites you might want to check out. You can even find out the name and contact information of site owners, how often that site is visited and how fast it can turn pages.

Alexa is stuffed full of helpful tools. For instance, if you run across a page in which you see the message "file not found," Alexa can show you a previous version of the page. There's even a link to an online dictionary, and a thesaurus, too.

Claim Your Name

SO YOU want to set up shop on the Internet? Then take care in choosing a domain name. If you try to use a domain name that someone else already has dibs on, you may get slapped with a lawsuit. (McDonald's, Time-Warner, Hasbro and other companies have taken up the cudgel against those daring to use trademarked names as domain names.)

Unfortunately, if a domain name already belongs to someone else, you're out of luck. But here are some tips from Victor G. Arcuri, general manager of Arvic Search Services Inc., a trademark name search service in Calgary, Alberta, for securing your own domain name.

First, go to the U.S. Department of Commerce's Patent and Trademark Office Web site at www.uspto.gov, and run a search on the name to see if it's already in use. A number of trademark search services can also find out for you.

Once you choose an unclaimed domain name, you must register it and use it properly. Essentially, that means using the name as a trademark—and using your site to provide free services or information that helps others. Offering information about your area of expertise, articles, links to other sites or helpful hints signifies you're providing services to the public, and thus your use of the domain name is protectable, explains Arcuri.

Arcuri offers other rules for protecting your domain name. He recommends using it as an adjective rather than as a noun. For instance, if your company is Xyz Products, use the phrase "Xyz products" in all company correspondence—not "the products of Xyz." Also, unless your domain name specifically uses a lower case initial letter, always capitalize its initial letter—you can even use all capital letters. In addition, always use your domain name consistently and exactly as registered—and don't use the domain name in plural form. For example, you can say, "Buy two Xyz products and get one free," but you should not say, "Buy two Xyzs and get one free." Finally, make sure you always use a trademark symbol (™) with your name.

Post Haste

THE U.S. Postal Service (USPS) has been working on a plan to deliver electronic postage (called indicium) over the Internet, and it looks like the technology is close at hand.

The latest news: Last August, the USPS gave the nod to a California company called StampMaster (www.stampmaster.com) to begin test-marketing a new Net-postage delivery service. The company is currently testing a software product that will print bar-coded postage stamps right at your desk, for a fraction of the cost of a postage meter.

To use the software, which StampMaster will offer for free from its Web site, you select the amount of postage needed and hit the Print button; the software then communicates with StampMaster's server. The server, which keeps track of how much money is on your USPS account, approves the purchase and sends a bar-coded indicium back to your computer. Then, presto: The indicium is automatically printed on your envelope.



StampMaster is "hoping for a national launch at the end of March," says company co-founder Jim McDermott. "We think it's going to be big."

Bronwyn Fryer writes about technology for Newsweek, C/NET *and other publications from her office in Santa Cruz, California.*

Online
Wilton, CT
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Bi – Monthly
FEBRUARY 1999
Bacon's

1998 ONLINE WORLD • OCTOBER 12-14



A Report from 1998 ONLINE

The ONLINE WORLD Conference and Exhibition,

held last October at the Washington Hilton and Towers, offered attendees a tightly packed three-day program with a solid assortment of six conference tracks.

Most notably, each day featured an especially informative and entertaining highlight, in a successful effort to enhance the conference buzz. Online Inc. offered popular general sessions each morning. Close to a thousand attendees, amounting to standing-room-only attendance, gathered in the International Ballroom to hear Brewster Kahle's keynote address, the Industry Announcements, and a first-ever CEO Industry Panel.

MONDAY

The Keynote

Monday's Opening Session began with Brewster Kahle's Keynote Address, entitled "Datamining the Internet for Quality Content." Kahle, Alexa Internet's cofounder, warned that the Web has reached "critical mass," and called librarians to task with the announcement that, "It is now time for librarians to build a digital library." Kahle estimates that there are about ten million people authoring for the Web, churning out a constant flow of content areas, doubling the Web's size every eight months—often with quality a mere afterthought.

For those concerned with cataloging and arranging information, this is a unique era. Kahle explained that the Web represents a historically unconventional collection of information in that it consists of "materials that started out in digital form, live in digital form, and die in digital form." He suggests that librarians should not just organize what already exists, but help create it. To do this, he listed the five characteristics of the ideal digital library:

- Collection with selection
- Easy access
- Organized materials
- Preservation of the materials
- Aid to patrons

With that, Kahle graded the Web's current progress and found only one of the five characteristics evident. Which one? Access is certainly free and open. Of the rest, Kahle offered progress on two of the components' organization and preservation. Thanks to Alexa, shareware that integrates with your browser, Web sites are beginning to be categorized by metadata and a peer-review ratings scheme. The traditional cataloging structure, Kahle says, won't translate smoothly into the new digital structure. Alexa also sends out robots that crawl through Web sites and archive the content—multimedia and all. What this accomplishes, and Kahle admits that this is on a very basic scale so far, is the ability to offer an out-of-print Web page service. Presumably, searchers could send in a request for a particular piece of information that had been archived before its host site changed content.

Since Kahle could not come up with any evidence of progress on the fronts of selection and aid to patrons, he left us with a score of one definite accomplishment out of five, and two points of slight progress made toward a digital library.

TUESDAY

Industry Announcements

The sixth annual ONLINE WORLD Industry Announcements Session featured nine

17th Annual Information Authorship Awards



The 1998 Information Authorship awards, sponsored by The Gale Group, were presented by George Plosker, Director of Client Services, to the following authors:

- **Walt Crawford** was the author of the *ONLINE* best article award for "Paper Persists: Why Physical Library Collections Still Matter." Susanne Bjørner and Bill Mickey accepted the award on his behalf. →

← **Greg Notess** captured the Best Columnist award for *ONLINE* and *DATABASE* magazines for his ON THE NET column.

← Erik and **Steve Arnold** won the best *DATABASE* article award for "Push Technology: Driving [illegible]









WORLD









The ONLINE WORLD Exhibit Hall was busy with information professionals learning about new products and services, and the LEXIS-NEXIS CyberCafe was especially popular among attendees for checking email or browsing the Web.

new product announcements, each squeezed into a six-minute time allotment. Most of the announcements came from familiar companies, with one newcomer added to the bunch.

LEXIS-NEXIS announced the addition of its Universe product to its collection of databases, a Web interface that allows easy end-user access and flexible search features (Boolean, "more like this," and a new Focus option). Dow Jones unveiled Web Center, a collection of Web sites of use to business users chosen by Dow Jones editors. Tim Andrews also noted that Dow Jones made available the complete AP Newswire service, plus an archive of AP news stories. Dialog used its six minutes to talk about DialogClassic.com, that features Web-based access to command-mode Dialog, and announced DialogWeb 2.0. Derwent announced a new agreement with the U.S. Patent & Trademark office where Derwent provides access to its World Patent Index at the desktops of the USPTO.

Enfish, the lone newcomer presenter, previewed its Tracker Pro software that enables a user to track and search information across the desktop, LAN, intranet, email, and the Web. (*ONLINE* readers can download a full, limited-time demo version of Tracker Pro from the Online Inc. Web site at http://www.onlineinc.com.) The Institute for Scientific Information introduced its MetaMaps product and Infonautics announced Electric Library Business Edition, a product geared to novice business users. EBSCO debuted EBSCO Online, a Web-based electronic journals subscription service. And finally, the Gale Group announced KnowledgeManager, a Web-based service that integrates high-tech information from the Internet with Computer Select.

WEDNESDAY

CEO Industry Panel

ONLINE WORLD also marked the debut of what is likely to become an annual feature: the CEO Industry Panel. An instant classic, the panel proved to be as entertaining as it was informative. Between barbed, but good-natured exchanges, seven CEOs offered insight into the future of information technology and distribution. Present were WavePhore Newscast's Peter White, The Gale Group's Allan Paschal, Northern Light's David Seuss, LEXIS-NEXIS' Hans Gieskes, Dow Jones Interactive's Tim Andrews, Arnold Information Technologies Steve Arnold, and The Dialog Corporation's Dan Wagner. Marydee Ojala, Editor of *DATABASE* magazine, guided the discussion with questions regarding the future of information delivery—including the roles of branding, enterprise-wide and desktop solutions, and multimedia as information—and how the Internet will affect all of it.

Exhibit Hall and Sessions

The Exhibit Hall featured a strong showing by the traditional companies, many displaying new Web-based product rollouts. A number of new companies on the exhibit floor also managed to grab a fair share of the attention. LEXIS-NEXIS sponsored the CyberCafe and did a terrific job decorating it as a hip, contemporary-looking cafe with neon accents—a definite eye-catcher—and popular destination for attendees between sessions.

The show's conference sessions were broken out into six tracks—Practical Searching, Intranet Development, Trends & Technologies, Resource Management, Content Reviews, and Roundtable Discussions. Topics ranged from search techniques—Web-specific and otherwise—to intranet development to content-focused sessions on competitive intelligence, international information, and more.

—Bill Mickey

NEWMEDIA
San Mateo, CA

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16 Times/Year

FEBRUARY 1999

FRONTLINE

THE FRONTLINE

THE SEARCH CONTINUES

BY SHELLY BRISBIN

In the headlong rush to transform themselves into portals, sites that began life as search engines have left something behind—good old-fashioned searching. Even sophisticated Boolean operations can yield notoriously inaccurate or outdated results. The listings are further distorted by the keyword spamming that companies use to steer their sites to the top of the list. Portals use relevancy ranking to partially offset keyword manipulation, but they use similar techniques to steer users onto portal-branded properties or sites owned by partners.

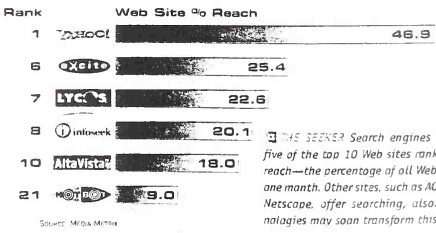
Fortunately, new search technology is coming right to the murky corners of the Net. The most immediate threats to the portals are browser-based search and indexing functions. Microsoft's Internet Explorer 5.0 includes a "search assistant" that can automatically select different search engines depending on the query. Netscape 4.5, meanwhile, offers a "smart browser" that brings up a streamlined index of popular sites in response to search queries, including prominent links to Netscape's own NetCenter pages.

While the browser vendors claim filtering makes life easier for casual searchers, expert Internet researchers are migrating to metasearch tools that can simultaneously comb the results of other search engines as well as the contents of local hard drives. These desktop tools, which supply their own relevance-ranking schemes, claim to bypass the portals' directed results. The most recent entrant is Apple's Sherlock, a find utility built into Mac OS 8.5 that allows Mac users to query several search engines simultaneously. Similar metasearch utilities for Windows include Mata Hari, from The WebTools Company, and Internet EZ Search from American Systems.

Bundling may be key to these tools' success. "Client-side search tools are not going to make it [on their own], but I can see these things being bundled with a browser," said Paul Hagen, an analyst at Forrester Research.

Other trends that should change Web hunting:

- **Collaborative Search.** Some intriguing new search tools customize based on the history of an individual or a group. The Alexa Internet plug-in, now bundled with both Explorer and Communicator, recommends sites based on a user's previous surfing activity. A rival program called Direct Hit, available on HotBot and America Online's ICQ tool, ranks search results according to their popularity among other users.
- **Natural-Language Search.** To open up search to a wider audience, vendors are letting users ask real-life questions. Ask AltaVista (formerly Ask Jeeves until acquired by AltaVista) lets users pose questions such as: "What is the temperature in Toronto?"
- **Media Search.** As Web bandwidth increases, so does Web media, but it tends to get lost in the text shuffle. While most search sites offer image searches, AltaVista recently upped the ante with AV Photo Finder, which offers thumbnail results of media searches. Excite, meanwhile, recently announced a search service that focuses on RealNetworks streaming media content.
- **Paid Search.** Advertisers are paying and pressuring portals for prime position in results lists, so why not bring this dynamic into the light of day? That's the thinking behind GoTo.com, which charges advertisers for position. To keep it above-board, GoTo reports to users how much money changes hands.
- **XML Search.** Though still in its infancy, XML promises to make searching very precise. For instance, if you were searching through classified ads specifying that Excel had to be in the "product" tag, you would exclude references to temporary workers with experience in Excel. New search engines tuned to XML content may actually improve accuracy over HTML searches. In October, Inktomi announced its Ultraseek Server 3.0 Content Classification Engine, which uses XML to index, organize, and update Web sites automatically.
- **Context Search.** The problem with most search engines is not that you can't find the link you want, but that it's buried 1,750 in a list of 300. New algorithms aim to remove much of the randomness from results. IBM's Clever technology, for example, analyzes links and the text surrounding them, returning those that offer the most meaningful responses. (See www.almaden.ibm.com/cs/k53/clever.html.)



THE SEEKER Search engines account for five of the top 10 Web sites ranked for their reach—the percentage of all Web traffic over one month. Other sites, such as AOL, MSN, and Netscape, offer searching, also. New technologies may soon transform this landscape.

http://infotg2p.dnit.com/cgi-bin/OJInteractive_Story?cgi=
WEB_ST_STORY&OJANum=710673868&page=
=search&hiding=1d2869%&ST_STAR Monday, January [illegible] 1999

Article View

Article 9 of 36
A Report from 1998 ONLINE WORLD.
Bill Mickey

01/01/99
Online
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The ONLINE WORLD Conference and Exhibition, held last October at the Washington Hilton and Towers, offered attendees a tightly packed three-day program with a solid assortment of six conference tracks.

Most notably, each day featured an especially informative and entertaining highlight. In a successful effort to enhance the conference buzz, Online Inc. offered popular general sessions each morning. Close to a thousand attendees, amounting to standing-room-only attendance, gathered in the International Ballroom to hear Brewster Kahle's keynote address, the Industry Announcements, and a first-ever CEO Industry Panel.

MONDAY

The Keynote

Monday's Opening Session began with Brewster Kahle's Keynote Address, entitled "Datamining the **Internet** for Quality Content." Kahle, **Alexa Internet** 's cofounder, warned that the Web has reached "critical mass, and called librarians to task with the announcement that, "it is now time for librarians to build a digital library." Kahle estimates that there are about ten million people authoring for the Web, churning out a constant flow of content areas, doubling the Web's size every eight months--often with quality a mere afterthought.

For those concerned with cataloging and arranging information, this is a unique era. Kahle explained that the Web represents a historically unconventional collection of information in that it consists of "materials that started out in digital form, live in digital form, and die in digital form." He suggests that librarians should not just organize what already exists, but help create it. To do this, he listed the five characteristics of the ideal digital library:

* Collection with selection

* Easy access

* Organized materials

* Preservation of the materials

* Aid to patrons

With that, Kahle graded the Web's current progress and found only one of the five characteristics evident. Which one? Access is certainly free and open. Of the rest, Kahle offered progress on two of the components: organization and preservation. Thanks to **Alexa** , shareware that integrates with your browser, Web sites are beginning to be categorized by metadata and a peer-review ratings scheme. The traditional cataloging structure, Kahle says, won't translate smoothly into the new digital structure. **Alexa** also sends out robots that crawl through Web sites and archive the content--multimedia and all. What this accomplishes, and Kahle admits that this is on a very basic scale so far, is the ability to offer an out-of-print Web page service. Presumably, searchers could send in a request for a particular piece of information that had been archived before its host site changed content.

Since Kahle could not come up with any evidence of progress on the fronts of selection and aid to patrons, he left us with a score of one definite accomplishment out of five, and two points of slight progress made toward a digital library.

TUESDAY

Industry Announcements

The sixth annual ONLINE WORLD Industry Announcements Session featured nine new product announcements, each squeezed into a six-minute time allotment, Most of the announcements came from familiar companies, with one newcomer added to the bunch.

LEXIS-NEXIS announced the addition of its Universe product to its collection of databases, a Web interface that allows easy end-user access and flexible search features (Boolean, "more like this," and a new Focus option). Dow Jones unveiled Web Center, a collection of Web sites of use to business users chosen by Dow Jones editors. Tim Andrews also noted that Dow Jones made available the complete AP Newswire service, plus an archive of AP news stories. Dialog used its six minutes to talk about DialogClassic.com, that features Web-based access to command-mode Dialog, and announced DialogWeb 2.0. Derwent announced a new agreement with the U.S. Patent & Trademark office where Derwent provides access to its World Patent Index at the desktops of the USPTO.

Enfish, the lone newcomer presenter, previewed its Tracker Pro software that enables a user to track and search information across the desktop, LAN, intranet, email, and the Web. (ONLINE readers can download a full, limited-time demo version of Tracker Pro from the Online Inc. Web site at http:// www.onlineinc.com.) The Institute for Scientific Information introduced its MetaMaps product and Infonautics announced Electric Library Business Edition, a product geared to novice business users. EBSCO debuted EBSCO Online, a Web-based electronic journals subscription service. And finally, the Gale Group announced Knowledge-Manager, a Web-based service that integrates high-tech information from the Internet with Computer Select.

WEDNESDAY

CEO Industry Panel

ONLINE WORLD also marked the debut of what is likely to become an annual feature: the CEO Industry Panel. An instant classic, the panel proved to be as entertaining as it was informative. Between barbed, but good-natured exchanges, seven CEOs offered insight into the future of information technology and distribution. Present were WavePhore Newscast's Peter White, The Gale Group's Allan Paschal, Northern Light's David Seuss, LEXIS-NEXIS' Hans Gieskes, Dow Jones Interactive's Tim Andrews, Arnold Information Technologies' Steve Arnold, and The Dialog Corporation's Dan Wagner. Marydee Ojala, Editor of DATABASE magazine, guided the discussion with questions regarding the future of information delivery--including the roles of branding, enterprise-wide and desktop solutions, and multimedia as information--and how the Internet will affect all of it.

Exhibit Hall and Sessions

The Exhibit Hall featured a strong showing by' the traditional companies, many, displaying new Web-based product rollouts. A number of new companies on the exhibit floor also managed to grab a fair share of the attention. LEXIS-NEXIS sponsored the CyberCafe and did a terrific job decorating it as a hip, contemporary-looking cafe with neon accents--a definite eye-catcher--and popular destination for attendees between sessions.

The show's conference sessions were broken out into six tracks--Practical Searching, Intranet Development, Trends & Technologies, Resource Management, Content Reviews, and Roundtable Discussions. Topics ranged from search techniques-Web-specific and otherwise--to intranet development to content-focused sessions on competitive intelligence, international information, and more.

17th Annual Information Authorship Awards

The 1998 Information Authorship awards, sponsored by The Gale Group, were presented by George Plosker, Director of Client Services, to the following authors:

* Walt Crawford was the author of the ONLINE best article award for "Paper Persists: Why Physical Library Collections Still Matter." Susanne Bjorner and Bill Mickey accepted the award on his behalf.

Greg Notess captured the Best Columnist award for ONLINE and DATABASE magazines for his ON THE NET column.

Erik and Steve Arnold won the best DATABASE article award for "Push Technology: Driving Traditional Online into the Corner."

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WINDOWS MAGAZINE ONLINE
February 01, 1999, Issue: 1002
Section: Reviews

Test Drive: Internet Explorer 5.0

Scot Finnie

Hop into the second beta of Internet Explorer 5.0, and the first thing you'll think is: This isn't so different. But as you begin to use the new browser, you'll find Microsoft has refined and streamlined many existing features.

The big news is an extensive makeover of the interface, including search, autocompletion, offline Web browsing, customizable toolbar and bookmark functions. The developers introduced new levels of customizability, ditched many of the annoyances from previous versions, simplified setup, provided more flexibility for multiple Internet connections and introduced invisible but important underpinnings for Web site developers. IE 5.0 also delivers a significantly upgraded version of Outlook Express.

After more than a month of all-day, everyday use, I've grown to like IE 5.0 immensely. It doesn't represent a paradigm shift; in fact, one of its advantages is that IE 4.0 users will feel instantly at home in IE 5.0. But when combined, the long list of fixes, refinements and improvements adds up to a browser that just works a lot better than IE 4.0.

The search is over

Microsoft gave IE's Web search features a much-needed overhaul. A new Search Assistant helps you choose the right resources to search. The revamped Search bar sprouts buttons for New Search, Next Results Page, Customize Search Engines and Help.

However, IE 5.0 still lacks a few features found in Netscape Navigator. For instance, IE doesn't offer anything akin to Navigator's What's Related feature (supplied by Alexa), which displays hot links to Web sites related to the page you're viewing. But you can install the free Alexa (http://www.alexa.com) Web Accessory in Internet Explorer 4.0 and 5.0. Web Accessories are site-served content that take the form of custom Explorer bars, toolbar buttons or menu items. Alexa and the Bloomberg, MSN and The New York Times sites offer Web Accessories for IE 5.0.

IE 5.0 Beta 2 also lacks a true semblance of Navigator's Internet Keywords feature, which lets you type words or phrases-such as NASA, Ford or United Airlines-in the Location bar and pass through directly to those organizations' Web sites. Microsoft is still working on this area. Like Navigator, IE 5.0 will pass through the best Web site match in a keyword search; but because it has a two-paned interface with the Search bar, it may also show alternative Web sites there-a clear improvement.

Autocompletion is used extensively-and effectively-in IE 5.0. The new browser automatically corrects common typing errors in URLs. As you type, IE 5.0 makes an educated guess about what page you're trying to reach. It then offers a drop-down list of similarly worded URLs to select from. In hunting for matches, AutoComplete searches both your history and Favorites. It's a feature that can sometimes save more time than you'd expect.

Better browsing

IE had offline browsing before, but it was difficult to use. Now, it's a lot easier: To make a site available offline, you simply put a checkmark in the Add Favorites box.

Microsoft has also added a smart local cookie technology that saves names, passwords, street addresses, e-mail addresses, user names and other details you've previously entered into Web forms. Then it offers this information to you on automatic pop-up menus on future Web forms. Unlike other browser cookies, no other computer is privy to this information.

More welcome improvements

Microsoft corrected many of IE 4.0's petty annoyances. First, since IE 5.0 isn't a shell update, it doesn't transform the look and feel of your operating system, which was a problem with IE 4.0. It doesn't include Active Desktop or IE 4.0's annoying Channels-although IE 5.0 can work in harmony with your existing Windows 98 or IE 4.0 installation.

My favorite fix in IE 5.0? The abridged status bar that appeared in IE 4.0 is gone. It wasn't large enough to display the full URL behind a link before you clicked it, something more experienced Web surfers found frustrating. I've always found IE's repetitive warning dialog boxes annoying. It's much easier to turn off these "features" in IE 5.0.

With IE 5.0, you can rename Favorites right on the Favorites menu by right-clicking them and choosing Rename. After you install IE 5.0, you'll find you can right-click to rename items on the Start menu and its submenus. In addition, when you save a specific page deep in a framed Web site as a Favorite, IE is smart enough to save the actual page you're on. And finally, Microsoft has included a Favorites import and export tool.

The process of managing Favorites still hasn't received enough attention. In fact, in some ways it has gotten worse. You still can't search them, still can't undo recent changes you made to them, and there's still no solid, dedicated tool for managing them. The new, dumbed-down Organize Favorites dialog box is less useful than it was before. For instance, you can't do anything else in IE 5.0 while Organize Favorites is open.

Setup and connections

Microsoft has improved the installation process by giving you greater choices about what to install. You can start with a 6.5MB to 7MB browser-only version of IE 5.0, which is smaller than IE 4.0. When you encounter a Web page that requires a new component, IE can automatically install the missing component. This feature is called Install On Demand.

The new Internet Control Panel is a welcome improvement. It adds support for multiple dial-up connections as well as a LAN connection. There's also an automatic detection capability for LAN connections and additions to the panel that lets you select default components.

Outlook Express enhancements

Finally, in version 5.0, Outlook Express gets a major upgrade, with a superb new Identity Manager for multiple users or identities. I know of no other e-mail program that does this better than the beta of Outlook Express 5.0.

Other major new features include junk e-mail filtering, a new Rules Wizard, extended rules, multiple signatures, offline news and e-mail capabilities, and Outlook 98 integrated contacts. Outlook Express 5.0 finally has all it needs to potentially supplant Eudora Pro Email as the Internet e-mailer of choice.

Where it stands

Internet Explorer 5.0 wasn't quite far enough along yet for us to make a full-fledged recommendation at press time. Based on experiences with this beta version, however, it looks like Microsoft has another winner on its hands. But Netscape has a return volley coming up, so the fracas will continue to be interesting.

--Quick View--

Internet Explorer 5.0

Bottom Line: This version is better in dozens of small ways, and it makes many common Web browsing tasks easier

Platforms: 98, 95, NT

Pros: Peccadilloes banished; new autocomplete and custom toolbar usability features; improved search functions; better dial-up controls; Outlook Express gets major revision

Cons: Organizing Favorites is still difficult; new search features were incomplete in this beta; new Connections dialog box could use further consideration

Price: Free download

Microsoft Corp., 800-426-9400, 425-882-8080. Winfo(R) #780

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WINDOWS MAGAZINE ONLINE
February 01, 1999, Issue: 1002
Section: Reviews

Browse the Web Your Way With NeoPlanet

Scot Finnie

When I took Bigfoot's NeoPlanet 2.0 browser for a test drive, the word "slick" came to mind. This new shell program for Internet Explorer is fun to use, well designed and downright ingenious. So much so, in fact, that we're placing it on our WinList.

So, why would you use NeoPlanet 2.0 over Internet Explorer or Netscape Navigator? Well, it's just more customizable, for one thing. You can change the browser's entire look, feel and sounds with 15 schemes. Whichever look you choose, NeoPlanet has a snappy feel, and its interface offers excellent controls. This second version is so different from the abysmally designed original that just about the only thing the two share is a concept.

More than a pretty face

NeoPlanet comes with a built-in set of channels that make it half browser, half portal. The 25 or so core channels-which include News, Money and Computing-are presented in a logical, accessible way. Each provides a good selection of links from a wide variety of top-notch Web content builders.

Customization and personalization are a big part of what makes the program attractive. Using the built-in ChannelDesigner, you can build your own channels or modify existing ones. NeoPlanet is also surprisingly complete and self-sufficient. It includes integrated multiple folder-based e-mail that's simple and very usable, though I would like to see support for rules, multiple identities, stationery and news reading. The e-mail functions work with pre-existing accounts of any type, including Web-based e-mail accounts. You can also opt to use any local e-mail client software, or import settings from installed clients.

The ingenious part

In a quiet, smart sort of way, NeoPlanet is sneaking in the back door on the emerging second-generation battle for Internet Desktops. Like Communicator 4.5 and Internet Explorer 5.0, NeoPlanet provides Internet database-enhanced functions. For example, the NeoPlanet browser has a What's Related menu of context-sensitive links to Web sites similar to the one you're currently viewing. The feature is virtually identical to the What's Related menu in Navigator 4.5, and both are hosted by the Alexa database. And like both Navigator and IE, it lets you input plain-English entries in URL bars when you don't know a specific URL.

One to watch

NeoPlanet makes money because it takes a piece of the advertising fees and a small piece of the revenue made from the sale of goods through its Shopping channel. The more the browser gets distributed, the greater its revenue. The idea is for Bigfoot to create the quintessential morphing browser that businesses, associations, kennel clubs, rock bands and so forth worldwide can use, brand with their own logo and even add channels. It's an intriguing business model, and we look forward to seeing whether it flies.

Because it harnesses Microsoft's componentized browser, the NeoPlanet download (http://www.neoplanet.com) is only about 1.7MB. NeoPlanet renders HTML, runs Java and scripts, and in general performs as well as the version of IE already installed on your system. That is, we found it fast, reliable and ready to take to the Internet. If ever there was a browser for the masses, NeoPlanet is it.

--Quick View--

NeoPlanet 2.0

Bottom Line: If you like looking at new browsers, don't miss the chance to try this one

Platforms: 98, 95, NT

Pros: Fun to use; easy to customize; includes integrated e-mail; snappy performance

Cons: E-mail is light on features; can't drag URL from Address bar to your Desktop

Price: Free download

Bigfoot International, 212-262-1118, fax 212-262-1079. Winfo #751

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Article 2 Return to Headlines

Alexa 3.0
Geoff Bowers

02/01/99
ABIX (Australasian news abstracts)
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Source: Internet.au Feb 1999 p74 (short).

A new software utility for Web browsers has hit the Australian market as at February, 1999. **Alexa** 3.0 is an intelligent program that adds an additional toolbar to the Web browser. The toolbar provides information such as speed, traffic, popularity and how often the content is updated. The software can be downloaded free of charge over the Internet and is also included in **Netscape** Communications Corporation's latest browser software release; Geoff Bowers; inset.

Display as: Full Article

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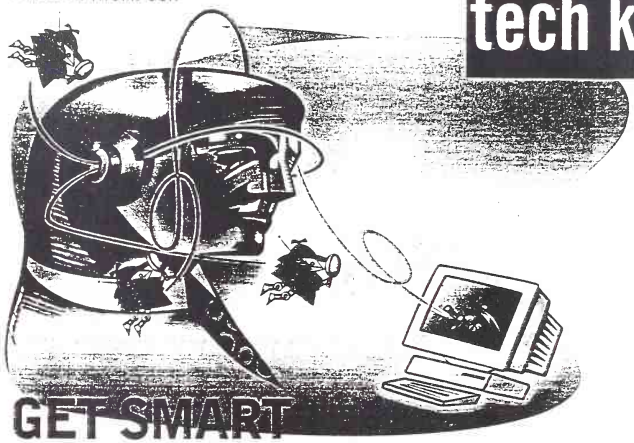
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FEBRUARY 1, 1999

tech know

BY CLIVE THOMPSON



GET SMART

CAN INTELLIGENT AGENTS HELP WITH THE INFO-GLUT?

PICKING YOUR FAVOURITE MUSIC IS, of course, a deeply personal matter of taste. But lately, I've been getting advice from a piece of software.

It's a program called Firefly, which runs at a music-fan Web site called MyLaunch. The Firefly software analyzes your listening habits, compares them with the listening habits of other people, and then tries to predict new albums you'd like. After analyzing me, the Firefly engine offered up two albums it claimed that I would enjoy. One was Prodigy's *The Fat of the Land*, a bit of throbbing, angry British techno that became infamous in 1997 for its controversial track *Smack My Bitch Up*. And the other recommended album? A compilation of greatest hits from lounge-king Burt Bacharach.

You could snicker. But despite appearances, this sort of digital psychoanalysis is part of the latest booming trend in technology tools—"intelligent agents."

A sort of sidetrack in the hunt for artificial intelligence, agents have been beta-ed and talked about for years. But now, intelligent agents are finally becoming an everyday reality, in the form of a variety of downloadable software tools and specialized Web sites.

Mostly, these agents are designed for a simple purpose: to help us handle the info-glut. As their name implies, they're supposed to be more than just passive filters. Instead, these agents actively track our surfing and clicking, learning what we like, and then pointing us toward new material they assume we'd like. Or they troll the Net, hunting for news for us while we're off-line doing something more important, like the dishes, or maybe thinking.

In many ways, agents point to the stinging paradox of our times: We live in an Information Age where there is too much, uh, information. Three years ago, we complained that there was "nothing on the Net." Now, with the boom in news sites, instant stock quotes, bug-eyed investor E-zines and dancing-baby ephemera, data are dealt out by the shovelful, and the signal-to-noise ratio is getting simply unruly.

"People are getting deluged—there's more out there than anyone can deal with on their own," says Henry Lieberman, a research scientist at the Massachusetts Institute of Technology who studies the field. For most Net users, he notes, finding useful material has meant either mastering sophisticated search-engine techniques or simply surfing through loads of junk. "What [agents] are trying to do," Lieberman adds, "is find a middle ground between those two."

Indeed, the hunt for the ultimate agent has provoked a minor feeding frenzy in the tech sector. In August, on-line bookstore Amazon bought Junglee, a company that has pioneered intelligent-agent software for helping people comparison-shop on the Net. In September, search-engine company Inktomi picked up C2B Technologies, makers of similar comparison-shopping tools.

Absent the hype, though, the question remains: What impact can agents have on the daily life of the "end-user" (the computer industry's ever-present, willfully perverse phrase for "customer")? Just how useful are these things?

Partly, it depends on how "intelligent" the agent attempts to be. To wit: The simpler the agent's task, the more likely it is to pull it off correctly.

ILLUSTRATION: LAURENTIU ALVAREZ

Your Special Agents

NEWSTRACKER (nt.excite.com): Choose personalized topics; NewsTracker will monitor more than 300 news sources every day to find matching stories.

ALEXA (www.alexa.com): This freeware runs alongside your browser, tracking your surfing habits and recommending new sites to visit.

NETMIND (www.netmind.com): Monitors any Web site you choose, notifying you when its contents change.

MYSIMON (www.mysimon.com): Pick the item you're looking for, then have MySimon hunt for deals at on-line stores.

PRICELINE (www.priceline.com): Pick the city you want to fly to and the price you're willing to pay; PriceLine notifies you when it finds a match. Does the same for hotels, car purchases, and—whoa—mortgages.

One good example of this is NewsTracker, a free service of the search-engine company Excite (nt.excite.com). Users pick a topic, as narrow or broad as they want, and NewsTracker monitors more than 300 different on-line news sources all day long, bringing back articles that match the criteria. Here, the agent isn't much more than an automated search engine, so it's difficult for it to screw up. I used it last fall to track the slow-motion train wreck of the federal Conservative leadership vote, and was delivered almost no off-target stories. Netizens are currently using it to track more than one million custom topics; another five million users every day are surfing NewsTracker's own preset topics. "One of the biggest uses is businesspeople tracking what their competition is up to," says Kris Carpenter, Excite's director of search services.

As agents get more complex, they can go beyond merely fetching material for which you ask. Instead, they make unnervingly good predictions about where you'd like to go today. Some of these more sophisticated agents—such as MyLaunch's music site and the book-recommendation service at Barnes and Noble's on-line bookstore (www.barnesandnoble.com)—use "collaborative filtering." Collaborative filtering works by a type of mob rule. The software tracks users' choices, and extrapolates common threads in those choices to you. "It sort of goes, 'Other people who like A also like B—so if you like A, maybe you'll like B too.'" says Jim Hughes, general manager of MyLaunch.

As the agent gets more predictive, though, it can also overreach itself, going bizarrely astray. I told Barnes and Noble that I liked the true-life thriller *The Perfect Storm*; it suggested I read *NT: A Strategic Review*, a technical manual about Windows NT. (There may be a very deep, intentional irony here, but I doubt it.) As critics point out, collaborative filtering only produces accurate predictions when there's broad consensus on popular things. Once you hit marginal information, things fall apart.

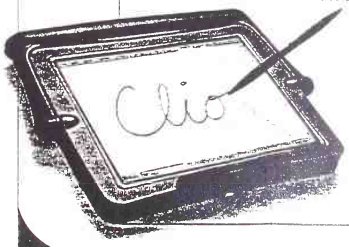
Which is really the biggest problem with agents. Consider: Marginal information—the stuff you stumble upon by happy accident—is usually the best stuff. We most often discover the useful tidbits when we're least looking for them. We're reading one story in a newspaper when we see, out of the corner of our eyes, a stray notice about an issue or event we've never heard of. This is the essence of true browsing, a dying art form both off- and on-line. When you look at it this way, the problem with agents isn't that they produce weird results. It's that they aren't weird *enough*—they're unlikely to tell us something that we didn't know we needed to know.

Sure, the signal-to-noise ratio on the Internet truly gnaws. But what about when the noise is more useful than the signal? When we finally get an agent that can actually mimic the complex, contradictory ways that we truly find our news, it'll be more than just "intelligent"—it'll be "civilized." ●

Clive Thompson can be reached via E-mail at clive@bway.net

THE SAW-OFF

Portable computing suffers from two extremes: You're stuck with either a laptop too heavy to really be "portable" or a palmtop too tiny to be of any use. Vadem's new Clio goes halfway down the middle—you can enter data using its relatively full-size keyboard, or write directly on the screen using handwriting recognition. Running Windows CE, it handles most document types and surfs the Net, complete with a built-in 33.6 modem. Best of all, the flip-up screen rotates a fluid 360 degrees, making data-crunching in economy-class airplane seats vaguely comfortable. Battery time: theoretically 12 hours (www.vadem.com; tel: (408) 467-2100; $999 U.S.).



VAPORIZING WARE

Just so you know, when you drag that document onto the trash on your computer, it doesn't necessarily vanish. The data sit inert on your hard drive—sometimes for years—so that anyone with a subpoena and a data-recovery program can bring them back to life. So if you really, really want to make sure those embarrassing little memos ("My Supervisor Hate File," "301 Dead Baby Jokes," "Crush Netscape, signed Bill G.", and so on) are truly gone, get a copy of Shiva, Destroyer of Files, by Isis Software. It writes over deleted files with random junk data, making them unrecoverable. A favourite of hackers. Windows only (www.isis-software.com, $19.95).

Jericho, NY

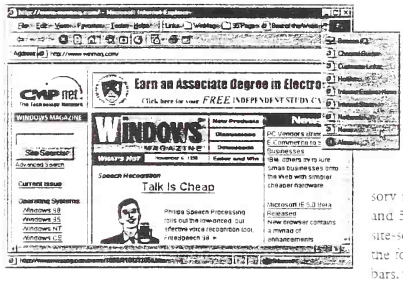
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FEBRUARY 1999

Bacon's

Test Drive: Internet Explorer 5.0

By Scot Finnie



Although IE 5.0 looks much the same as IE 4.0 on the surface, the new browser is riddled with dozens of small advances, such as this drop-down menu that makes it easier to access items on your Links bar.

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IE 5.0 Beta 2 also lacks a true semblance of Navigator's Internet Keywords feature, which lets you type words or phrases—such as NASA, Ford or United Airlines—in the Location bar and pass through directly to those organizations' Web sites. Microsoft is still working on this area. Like Navigator, IE 5.0 will pass through the best Web site match in a keyword search; but because it has a two-paned interface with the Search bar, it may also show alternative Web sites there—a clear improvement.

Autocompletion is used extensively—and effectively—in IE 5.0. The new browser automatically corrects common typing errors in URLs. As you type, IE 5.0 makes an educated guess about what page

40 **366MHZ CELERON-BASED ENTERPRISE SYSTEMS:** Compaq Deskpro EN C366/6400/CDS, HP Vectra VE Series 8

51 **V.90 MODEMS:** 3Com U.S. Robotics 56K Faxmodem, Diamond SupraExpress 56e V.90, Hayes Accura 56K/V.90 Modem, Multi-Tech MultiModemZBA, Zoom 56Kx DualMode Faxmodem

54 **PRODUCT REVIEWS**

57 **Hardware:** Corporate desktops from Hitachi, Toshiba and NexTrend are feature-rich, network-ready and easy to maintain; ultraportability compromises the performance of tiny notebooks from MAG and Toshiba; Compaq, Micron and Systemax deliver powerful 450MHz desktops for the general-business user; Digital LCD displays from Princeton, Sceptre and ViewSonic dazzle with superior images; Canon's BJC-5000 ink jet supports seven-color photo-realistic printing; and devices from Dazzle and Adaptec simplify video capture.

68 **System Specs:** Our feature charts help you buy what you need.

70 **System Performance at a Glance:** How this month's systems stack up.

105 **Software:** Bigfoot's NeoPlanet 2.0 browser is slick, well-designed and a joy to use; Norton 2000 helps you solve potential Y2K problems for hardware and software; Diskeeper keeps your Windows NT system running smoothly.

113 **Product Reviews by OS:** Operating system support.

115 **The WinList:** Our recommended products.

3785-40

you're trying to reach. It then offers a drop-down list of similarly worded URLs to select from. In hunting for matches, AutoComplete searches both your history and Favorites. It's a feature that can sometimes save more time than you'd expect.

Better browsing

IE had offline browsing before, but it was difficult to use. Now, it's a lot easier: To make a site available offline, you simply put a checkmark in the Add Favorites box.

beta preview

Microsoft has also added a smart local cookie technology that saves names, passwords, street addresses, e-mail addresses, user names and other details you've previously entered into Web forms. Then it offers this information to you on automatic pop-up menus on future Web forms. Unlike other browser cookies, no other computer is privy to this information.

More welcome improvements

Microsoft corrected many of IE 4.0's petty annoyances. First, since IE 5.0 isn't a shell update, it doesn't transform the look and feel of your operating system, which was a problem with IE 4.0. It doesn't include Active Desktop or IE 4.0's annoying Channels—although IE 5.0 can work in harmony with your existing Windows 98 or IE 4.0 installation.

My favorite fix in IE 5.0? The abridged status bar that appeared in IE 4.0 is gone. It wasn't large enough to display the full URL behind a link *before* you clicked it, something more experienced Web surfers found frustrating. I've always found IE's repetitive warning dialog boxes annoying. It's much easier to turn off these "features" in IE 5.0.

With IE 5.0, you can rename Favorites right on the Favorites menu by right-clicking them and choosing Rename. After you install IE 5.0, you'll find you can right-click to rename items on the Start menu and its submenus. In addition, when you save a specific page deep in a framed Web site as a Favorite, IE is smart enough to save the actual page you're on. And finally, Microsoft has included a Favorites import and export tool.

The process of managing Favorites still hasn't received enough attention. In fact, in some ways it has gotten worse. You still can't search them, still can't undo recent changes you made to them, and there's still no solid, dedicated tool for managing them. The new, dumbed-down Organize Favorites dialog box is less useful than it was before. For instance, you can't do anything else in IE 5.0 while Organize Favorites is open.

Setup and connections

Microsoft has improved the installation process by giving you greater choices about what to install. You can start with a 6.5MB to 7MB browser-only version of IE 5.0, which is smaller than IE 4.0. When you encounter a Web page that requires a new component, IE can automatically install the missing component. This feature is called Install On Demand.

The new Internet Control Panel is a welcome improvement. It adds support for multiple dial-up connections as well as a LAN connection. There's also an automatic detection capability for LAN connections and additions to the panel that lets you select default components.

Outlook Express enhancements

Finally, in version 5.0, Outlook Express gets a major upgrade, with a superb new Identity Manager for multiple users or identities. I know of no other e-mail program that does this better than the beta of Outlook Express 5.0.

Other major new features include junk e-mail filtering, a new Rules Wizard, extended rules, multiple signatures, offline news and e-mail capabilities, and Outlook 98 integrated contacts. Outlook Express 5.0 finally has all it needs to potentially supplant Eudora Pro Email as the Internet e-mailer of choice.

Where it stands

Internet Explorer 5.0 wasn't quite far enough along yet for us to make a full-fledged recommendation at press time. Based on experiences with this beta version, however, it looks like Microsoft has another winner on its hands. But Netscape has a return volley coming up, so the fracas will continue to be interesting. ◻

98 95 NT

Internet Explorer 5.0

Bottom Line: This version is better in dozens of small ways, and it makes many common Web browsing tasks easier

Pros: Peccadilloes banished; new autocomplete and custom toolbar usability features; improved search functions; better dial-up controls; Outlook Express gets major revision

Cons: Organizing Favorites is still difficult; new search features were incomplete in this beta; new Connections dialog box could use further consideration

Price: Free download

Microsoft Corp., 800-426-9400, 425-882-8080. **Winfo® #780**

Windows is a registered trademark of the MIT Media Lab.

INTERNET

You use the Internet every day, but to really take advantage of it you need the right insider tools. The place to get them? The Web, of course. You'll find can't-live-without search helpers, smart e-mail managers, utilities to speed surfing, spam killers, and plenty of programs for dressing up Web pages.

WEB BROWSER



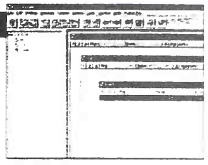
Internet Explorer 4.01, Microsoft

The Web starts here. Chances are you're already using the top-rated browser, which also happens to be free. It's fast, integrates seamlessly with Windows, and comes with excellent newsreader, conferencing, and e-mail apps.

ALSO CONSIDER . . .

Netscape Communicator Yes, you do have a choice. Netscape's excellent browser does just about everything Explorer does—and finally it's free too.

E-MAIL MANAGER



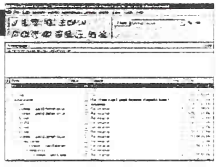
Eudora Light, Qualcomm

Who could live without e-mail? That's why you need this free version of the popular Eudora e-mail manager. It lets you sort mail by folders, automatically apply filters to incoming mail, and easily send and receive attachments. Plus it has a great address book.

ALSO CONSIDER . . .

David Harris Pegasus Mail An excellent e-mail manager that'll keep your in-box in check.

NEWSREADER



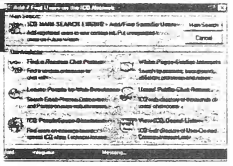
Gravity, MicroPlanet

Before there was the Web, there were newsgroups. And these public bulletin boards are still thriving on the Internet. Gravity makes it a breeze to subscribe and unsubscribe to groups, and offers background image decoding and customizable rules for organizing and prioritizing groups and messages.

ALSO CONSIDER . . .

Forte Free Agent The easy way to get started with newsgroups.

INTERNET COMMUNICATIONS



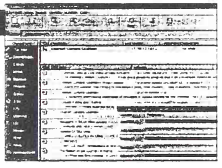
ICQ, Mirabilis

Forget e-mail. Why not chat over the Web instead? ICQ (pronounced "I seek you") is the best there is in Internet communications. Find other people who share your interests, chat, or send them e-mail–like messages. ICQ even hooks to videoconferencing apps.

ALSO CONSIDER . . .

Hilgraeve DropChute+ This unique program lets you connect directly to others on the Web and transfer files to them or chat.

INTERNET SEARCH TOOL



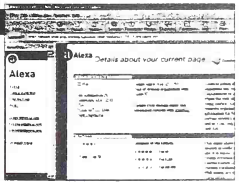
Copernic 98, Agents Technologies

Save yourself time and frustration with this indispensable search utility. It lets you search the entire Web or specific channels, including news, technology, business, and finance. It also surveys dozens of the top engines at once, then ranks the results so you can easily find what you're looking for.

ALSO CONSIDER . . .

FerretSoft LLC WebFerret The Web's top search engines are just a click away. WebFerret adds an entry to your Windows Start menu so you can search without even loading your browser.

INTERNET UTILITY



Alexa, Alexa Internet

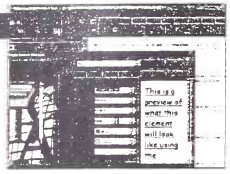
Finally! An effortless way to find great Web sites. When you're at one site, Alexa offers a list of related sites. Simply click to jump to it. You also get information about any site, such as who owns it and how fresh the content is.

ALSO CONSIDER . . .

Northwest Performance NetScanTools Here are all the Internet geek tools you could wish for rolled into one. Ping sites to see if they're live, find out who owns domains, and much more.

PCComputing

WEB PUBLISHER



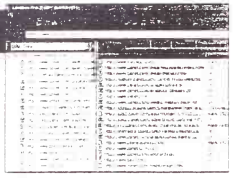
HomeSite, Allaire

The one Web publisher that pleases everyone. Professionals like it because you can type in code directly and it supports frames and tables. Beginners love the wizards and graphics.

ALSO CONSIDER . . .

CoffeeCup HTML Editor++ 98 Experienced HTML coders will want to try this excellent publisher.

WEB PUBLISHING UTILITY



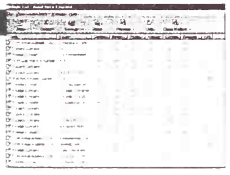
Software Linkbot, Tetranet

Broken links, missing images, and old content are the bane of any Web publisher. Linkbot solves these problem without a lot of grief.

ALSO CONSIDER . . .

Ulead GIF Animator The easy way to create animated GIFs for your Web site. It even converts AVI and QuickTime files to GIF animations.

SPAM KILLER



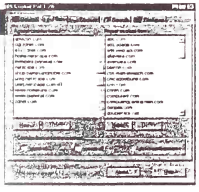
Spam Exterminator, Unisyn

Delete, delete. Here's a better way to nix spam from your in-box. Exterminator sniffs out unsolicited mail from over 8,000 known spammers and automatically kills messages from them.

ALSO CONSIDER . . .

Contact Plus Spam Buster Another smart way to detect and purge junk mail.

COOKIE KILLER



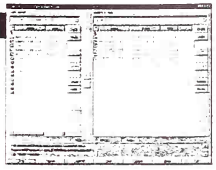
Cookie Pal, Kookaburra Software

Careful. You're being spied on. But fear not, because Cookie Pal keeps tabs on who's watching you. It cleans cookies off your system, then alerts you when a site tries to send you a new one.

ALSO CONSIDER . . .

Webroot Software Cache and Cookie Washer Zap cookies, and automatically purge your Internet cache files, address bar drop-down menu, and history list.

FILE TRANSFER UTILITY



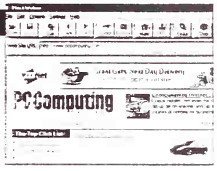
WS_FTP Professional, Ipswitch

Stop! Don't download a thing until you get this utility. Its Explorer-like interface makes it easy to get started, and you'll love the ability to send and receive multiple files at once as well as resume an interrupted download.

ALSO CONSIDER . . .

Lincoln Beach Software Download Butler The easy way to keep track of all the goodies you download. It categorizes, unzips, and even scans for viruses.

OFFLINE UTILITY



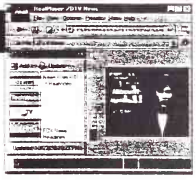
BlackWidow, SoftByte Laboratories

Bring the Web with you—no Net connection required. Download entire Web sites, individual pages, or selected files to review later.

ALSO CONSIDER . . .

askSam SurfSaver Save Web pages, then store them in searchable folders.

INTERNET MEDIA PLAYER



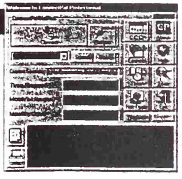
RealPlayer G2, RealNetworks

There's more to the Web than text and pictures. With RealPlayer you can listen to Internet radio stations and music, watch TV and video clips, and view animations.

ALSO CONSIDER . . .

Microsoft Windows Media Player The player you need to view animations on many popular sites.

DIAL-UP UTILITY



ConnectPal Professional, connectpal.com

Take control of your Web connection. ConnectPal automatically redials busy numbers and logs you on, automatically launches programs after you've connected, and keeps your Web connection alive.

ALSO CONSIDER . . .

Vector Development Dunce Do it for me: Dunce will automatically redial, log-in, and connect at your request.

Article 3 Return to Headlines

A New Browser (Utility) Emerges.(Evaluation)
Peter Jasco

02/01/99
Information Today
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Peter Jacso is associate professor of library and information science at the Department of Information and Computer Sciences at the University of Hawaii. He won the 1998 Louis Shores--Oryx Press Award from ALA's Reference and User Services Association for his discerning database reviews. His e-mail address is jacso@hawaii.edu.

NeoPlanet has several great features that JE and Navigator should, too

Developers of Internet browsers- with the possible exception of Opera-have mostly given up their efforts to compete with Microsoft Internet Explorer (IE) and **Netscape** Navigator. While Microsoft and **Netscape** are slugging it out, the smaller developers must have felt that it was better to stay out of the ring than get knocked out. Microsoft has been quickly catching up with **Netscape** , and, by the end of 1998, the two had roughly equal market share. America Online's buyout of **Netscape** may slow Microsoft's gains on the **Netscape** browser if AOL does not destroy Navigator with this acquisition-as it did when it purchased some other software. (For more on this, see Robin Peek's Focus on Publishing column, page 30.)

On the other hand, the number of thirdparty products that require Internet Explorer 3.x or better grew in 1998. However, none of them seems so important as BigFoot International, Inc.'s NeoPlanet browser utility. It is not a browser by itself, as it cannot run without core elements of Internet Explorer or Windows 98-which has the same core Internet browsing code elements-installed, but it appears as one to the end users. The fact that NeoPlanet requires IE merely to be installed (and to have added some features during installation) but not running reinforces the impression that NeoPlanet is a browser on its own. In my opinion, it has a very pretty interface with lots of brain and charisma. I found NeoPlanet so attractive and smart that ever since it has been installed, I've made it my default "browser"- many of ITs readers would do well to do the same. I'll explain why.

A Lightweight Add-on

NeoPlanet charms the user from the moment it's downloaded. It is less than 2 MB in size, so even on a 28.8-Kbps modem it takes less than 20 minutes to download (under normal circumstances). Installation is a breeze, or I should say Snap, as NeoPlanet integrates this fairly new Web portal and then some. It takes about 4 to 5 minutes to set up from the downloaded .exe file. The clean and slick interface is perhaps love at first sight (see Figure 1), but one of the most attractive and unique features of this software becomes evident only after you start using it. The key to its appeal is how you can personalize the whole interface to your liking.

NeoPlanet offers channels as subject guides/directories-as most other portal sites do-but with several essential differences. The channel pane on the right side of the screen remains visible. On other portal sites, one may feel lost as one goes deeper into subcategories. Not so in NeoPlanet. With the help of the channel pane, it is so easy to trace back your steps that even Hansel and Gretel would endorse it. When you click on a channel such as Travel, the home page of Preview Travel- the primary travel site (in the judgment of Snap's editors, anyway)-shows up in the main pane. The subcategories of the Travel Channel (Online Agents, Guides, Travel Writing, and Maps) appear above the main pane along with the name of the specific preferred sites recommended by the editors of Snap, such as Expedia, Travelocity, and Flifo. (See Figure 2.) You may rearrange these sites to your preference, as well as add and delete sites from the channel.

Different Strokes, Different Folks

If you feel that the channel pane or the subcategory bar or the site bar take up too much space on the screen, you can make them disappear with a click of the mouse- and then call them back with another click when you need them. The top bars also can be shrunk or enlarged. This is very intuitive, thanks to the rollover technique that displays an informative label as you pass your cursor over the navigational buttons and gizmos.

The big deal is, however, that you may customize the content of the channel pane at every level: the channel choices, the subcategories, and the site list. If you don't care about certain categories, subcategories, or specific sites using the Channel Designer feature, you may remove any elements in the channel pane, as well as add new ones down to the site level. I have added a channel for some of my favorite radio stations and another one for professional journals. (See Figure 3.) Editing is as intuitive as in IE's Favorites collection, but your favorite channels and subchannels remain visible as long as you want them to. During installation, NeoPlanet gets your cookies, bookmarks, and favorite sites defined in both IE and Navigator. Just click on them from the pull-down Favorites menu and drag their URLs to the appropriate NeoPlanet channel or subchannel.

There is a Channel Archive, so if you change your mind and want to reinstate a channel that you had removed it can be invoked from the Channels la Carte list. The archive also includes a Local Channels list (currently only for a dozen metropolises) and a User Channels list, if you'd prefer the choices of others who've shared their favorites with BigFoot. You may also exchange channels directly with others by simply importing and exporting channel files.

Schemes are additional interface-design elements. They define the look and feel of the interface-using different icons, background, font styles, and colors-but do not change the locations of the components on the screen. Beyond the default interface, there are over a dozen other predefined ones in the Scheme Archive. Most of them are excellent by anyone's standard and provide a refreshing choice when you get bored with the default interface. (See Figure 4.) During the holidays alone there were four extra schemes: Christmas, Xmas, Hanukkah, and Kwanzaa. There certainly will be many more schemes to come as users are encouraged to design and submit their own so that BigFoot may include them in the Scheme Archive. Schemes also can be directly imported and exported among users.

Built-in Goodies

NeoPlanet brings not only a refreshingly attractive and intuitive interface, but also adds a lot of extra functionality borrowing from the current and upcoming versions of IE and Navigator. In the rightmost part of the toolbar, you can spot the What's Related button. Clicking on it will list (in an insert window) sites that are considered related to the one you are looking at from **Alexa** 's Related Links database. This is a feature from **Netscape** Communicator 4.5 that went into public beta testing at the end of 1998.

NeoPlanet also installs its own e-mail client, so you don't need to invoke a separate e-mail program. This can be a godsend for those who have relatively little RAM. The e-mail program has all the trimmings of the best of this genre, including address book, spell checker, file attachment, user defined folders, saving in draft format, selection of font type, color, balding, italicizing, underlining, and text-centering.

Enhanced browsing offers great convenience. For a starter, it offers autocompletion of URLs just as the latest Navigator and IE versions do. It is enough to type in "infotoday"-NeoPlanet will add the "http:// www." prefix and the ".com" suffix. If the site is not found, it will automatically try the "net" suffix as Navigator does. So if the user enters "emediapro" for E-Media Professional's site, it will be found even though it's "http://www.emediapro.net." NeoPlanet also offers two other options. If the site is still not found, it will use the RealName database and look for Web sites of companies and organizations whose names match the search string entered, even if its core URL does not. This is good for those who enter "onlinetoday" instead of "ont," the core of the full URL: "http://www.ont.com." And if it is still not found, NeoPlanet will do a keyword search of the words entered in the URL cell. These options can be enabled or disabled by the user, and Web-site owners must register with RealName for th is service. The cost for the site owners is $100 for a year and well worth it. The beauty of NeoPlanet is that the RealName look-up need not be user-initiated: It is automatic unless the user specifically turns it off.

It is disappointing that NeoPlanet did not pick another nice feature from Navigator that is not in IE: print preview before actual printing. This is essential to avoid wasting paper printing all those Web pages that have just one or two (probably irrelevant) lines more than can fit on a single (paper) page. On the bright side, NeoPlanet offers users the ability to limit a Web search to some predefined domains (News Stories, Shopping, Software, Business Data, etc.) similar to the beta version of IE 5. Clicking on the domain label News, the search with the word "Hawaii" will be restricted to sites that are classified as news sites. Clicking on the Travel domain button will restrict the search about Hawaii to sites that are travel-related and that discuss Hawaii. Oddly, the domain limiting did not work when the Movies domain was selected, even though the search is automatically submitted to MovieFinder (which has 16 movies with Hawaii in the title)--and this you cannot customize. Making Internet Movie Database the default search site would be far better as it has more than twice as many for this search example as MovieFinder had, and is a more comprehensive database, in my opinion. The Advanced Search option invokes a branded version of Inktomi, the software used by Microsoft's portal and HotBot, among others. It is more than icing on the cake that NeoPlanet has a built-in modem-booster code.

All in all, this is outstanding software that costs nothing. It found a niche that both of the two superbrowsers neglected in favor of other developments: an attractive, highly customizable, and very intuitive interface. Together with its content and substance enhancements, NeoPlanet turns out to be an excellent tool set. It is soon to be available for Mac users and on a version that piggybacks on Navigator.

Display as: Full Article

Return to Headlines

Format For Printing

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Article 6

Return to Headlines

ZDNet

Internet Apps.(free software)(Product Information)

02/01/99
PC/Computing
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Web Utilities

You use the Internet every day, but to really take advantage of it you need the right insider tools. The place to get them? The Web, of course. You'll find can't-live-without search helpers, smart e-mail managers, utilities to speed surfing, spam killers, and plenty of programs for dressing up Web pages.

Web Browser

Internet Explorer 4.01, Microsoft

The Web starts here. Chances are you're already using the top-rated browser, which also happens to be free. It's fast, integrates seamlessly with Windows, and comes with excellent newsreader, conferencing, and e-mail apps.

Also consider . . .

Netscape Communicator Yes, you do have a choice. **Netscape** 's excellent browser does just about everything Explorer does--and finally it's free too.

Newsreader

Gravity, MicroPlanet

Before there was the Web, there were newsgroups. And these public bulletin boards are still thriving on the Internet. Gravity makes it a breeze to subscribe and unsubscribe to groups, and offers background image decoding and customizable rules for organizing and prioritizing groups and messages.

Also consider . . .

Forte Free Agent The easy way to get started with newsgroups.

Internet Search Tool

Copernic 98, Agents Technologies

Save yourself time and frustration with this indispensable search utility. It lets you search the entire Web or specific channels, including news, technology, business, and finance. It also surveys dozens of the top engines at once, then ranks the results so you can easily find what you're looking for.

Also consider . . .

FerretSoft LLC WebFerret The Web's top search engines are just a click away. WebFerret adds an entry to your Windows Start menu so you can search without even loading your browser.

E-Mail Manager

Eudora Light, Qualcomm

Who could live without e-mail? That's why you need this free version of the popular Eudora e-mail manager. It lets you sort mail by folders, automatically apply filters to incoming mail, and easily send and receive attachments. Plus it has a great address book.

Also consider . . .

David Harris Pegasus Mail An excellent e-mail manager that'll keep your in-box in check.

Internet Communications

ICQ, Mirabilis

Forget e-mail. Why not chat over the Web instead? ICQ (pronounced "I seek you") is the best there is in Internet communications. Find other people who share your interests, chat, or send them e-mail- like messages. ICQ even hooks to videoconferencing apps.

Also consider . . .

Hilgraeve DropChute+ This unique program lets you connect directly to others on the Web and transfer files to them or chat.

Internet Utility

Alexa , **Alexa** Internet

Finally! An effortless way to find great Web sites. When you're at one site, **Alexa** offers a list of related sites. Simply click to jump to it. You also get information about any site, such as who owns it and how fresh the content is.

Also consider . . .

Northwest Performance NetScanTools Here are all the Internet geek tools you could wish for rolled into one. Ping sites to see if they're live, find out who owns domains, and much more.

Web Publisher

HomeSite, Allaire

The one Web publisher that pleases everyone. Professionals like it because you can type in code directly and it supports frames and tables. Beginners love the wizards and graphics.

Also consider . . .

CoffeeCup HTML Editor++ 98 Experienced HTML coders will want to try this excellent publisher.

Web Publishing Utility

Software Linkbot, Tetranet

Broken links, missing images, and old content are the bane of any Web publisher. Linkbot solves these problem without a lot of grief.

Also consider . . .

Ulead GIF Animator The easy way to create animated GIFs for your Web site. It even converts AVI and QuickTime files to GIF animations.

Spam Killer

Spam Exterminator, Unisyn

Delete, delete. . . . Here's a better way to nix spam from your in- box. Exterminator sniffs out unsolicited mail from over 3,000 known spammers and automatically kills messages from them.

Also consider . . .

Contact Plus Spam Buster Another smart way to detect and purge junk mail.

Cookie Killer

Cookie Pal, Kookaburra Software

Careful. You're being spied on. But fear not, because Cookie Pal keeps tabs on who's watching you. It cleans cookies off your system, then alerts you when a site tries to send you a new one.

Also consider . . .

Webroot Software Cache and Cookie Washer Zap cookies, and automatically purge your Internet cache files, address bar drop-down menu, and history list.

File Transfer Utility

WS_FTP Professional, Ipswitch

Stop! Don't download a thing until you get this utility. Its Explorer-like interface makes it easy to get started, and you'll love the ability to send and receive multiple files at once as well as resume an interrupted download.

Also consider . . .

Lincoln Beach Software Download Butler The easy way to keep track of all the goodies you download. It categorizes, unzips, and even scans for viruses.

Offline Utility

BlackWidow, SoftByte Laboratories

Bring the Web with you--no Net connection required. Download entire Web sites, individual pages, or selected files to review later.

Also consider . . .

askSam SurfSaver Save Web pages, then store them in searchable folders.

Internet Media Player

RealPlayer G2, RealNetworks

There's more to the Web than text and pictures. With RealPlayer you can listen to Internet radio stations and music, watch TV and video clips, and view animations.

Also consider . . .

Microsoft Windows Media Player The player you need to view animations on many popular sites.

Dial-Up Utility

ConnectPal Professional, connectpal.com

Take control of your Web connection. ConnectPal automatically redials busy numbers and logs you on, automatically launches programs after you've connected, and keeps your Web connection alive.

Also consider . . .

Vector Development Dunce Do it for me: Dunce will automatically redial, log-in, and connect at your request.

Display as: Full Article

Return to Headlines

Format For Printing

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COLUMBIA DAILY
TRIBUNE

Tribune Online News Story

Story ran on February 8, 1999

PC INFO

Alexa browser plug-in offers site info, services

By SCOTT A. MAY
Special to the Tribune

If you're Internet savvy at all, you already know about Web browser plug-ins, like ShockWave and RealAudio. Plug-ins are primarily multimedia browser enhancements, adding effects like animated graphics and sound to Web sites that support them.

Now there's a new wave of Web accessories on the horizon that could change the way you use and view the Internet. Though less dynamic than multimedia plug-ins, these next-generation browser enhancements will instead concentrate on service and functionality. Mark my words: This stuff is going to be huge.

One of the first products out of the gate is called Alexa, a free advertiser-supported Web navigation service. This key word here is "free" — if you don't like Alexa, dump it. But I think most users will love it.

In a nutshell, Alexa plants itself inside your copy of Microsoft Internet Explorer or Netscape Navigator, in the guise of a small toolbar at the bottom of the screen. Toolbar components include links to similar sites, detailed information about the current Web page, and pop-up access to Webster's online dictionary and thesaurus, as well as the Encyclopedia Britannica Online and e-BLAST Internet Guide.

There's only two downsides that I can see. The first is losing about half an inch off the bottom of your browser window, but it's worth the sacrifice. The Alexa toolbar can be toggled on or off, as desired. The second downside is a slight degradation of Internet access speed, because the Alexa toolbar is basically an active browser sub-window, constantly being updated. Although I noticed the drop in speed, it's not enough to trigger frustration. If it does, turn it off until you need it.

Of course, all this free stuff comes at another minor price: ads.

You'll find a tiny banner ad in the far-right side of the toolbar, as well as context-sensitive links. I'd wager that most users rarely even notice. Alexa's creators promise anonymity, as far as advertisers go, claiming that no personal information will ever be sold. All in all, Alexa's advertising is no more intrusive than that of free e-mail services, like Juno or Hotmail.

The area of Web site information is particularly interesting. With a single click, you can find out who owns the site, how large it is, how often it updates, how popular it is, and user ratings.

Another fascinating aspect of Alexa is its Web page archives. Every 30 to 60 days, Alexa takes a "snapshot" of more than 500,000 Web pages. They've been doing this since 1996 and now have more than eight terabytes of Web page snapshots on file. One terabyte equals one million megabytes. And this library is open to everyone. So next time you get the infamous Error 404, which tells you that the page is not found, you can use Alexa to view the last known snapshot of the missing page.

Alexa is also a Web Accessory option in the latest editions of Internet Explorer 5.0 and Navigator 4.5. A Macintosh version has also been announced. Although Alexa works with America Online, it's incompatible with AOL's built-in browser. To use Alexa with AOL, you must log on to the service, but use an external browser to surf the Web.

You can download Alexa for free from its Web site, located at www.alexa.com. Within minutes, the program integrates itself with your browser and you're ready to go. For more information, contact Alexa Interactive at (888) 882-5392.

WIN95/98 TIP OF THE WEEK

If you ever need to talk to someone about hardware or software technical support, it helps to have your system information handy. If you've got a printer, here's how: Right-click on the My Computer icon and select Properties from the context menu. In the System Properties window, click on the Device Manager tab, then the Print button. Now select the "all devices and system summary" button and click OK.

This should produce enough information about your hardware, interrupts, ports, memory usage, devices and drivers to satisfy most tech support needs. Keep this printout on file for future reference, and update it whenever you add or change hardware configurations.

Scott A. May is a local free-lance writer who has been published in Computer Shopper magazine and other computer publications. He owns CompuSoft consulting in Columbia. Send e-mail to smay@trib.net.

Big purchase? Click for Instant Credit

Wednesday February 10 4:13 AM ET

NETWORK SOLUTIONS
Looking for a domain name? See what's available!
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Submit

'Targeted Advertising' Takes On New Meaning Online

PALO ALTO, Calif (Reuters) - Amazon.com would not have much luck hanging an ad in the window of a Barnes & Noble store. But it has managed to place online ads so that they pop up on the computer screen right on top of the barnesandnoble.com Web site.

British Airways strategically places some of its Internet ads so they can be superimposed on rival airline's Web sites. And the online vitamin store, VitaminShoppe.com, has found a way to get its name right below other e-commerce pages that sell natural food supplements.

Talk about targeted advertising. Internet retailers now have a way to advertise right in their competitors' virtual store fronts -- without being accused of trespassing.

The unusual service comes from Alexa Internet (www.alexa.com), a free Web navigation business that has attracted more than 100 advertisers including e-commerce heavyweights like Amazon.com and CDNow, since it began selling ad space last year.

Alexa is a service that tracks Internet users' surfing patterns to deliver them ``smart links" to relevant sites and in-depth statistics on the pages they visit. People who go to Alexa's Web site to download the service get a second toolbar on their computer screen.

The toolbar delivers statistics on different Web sites, like a company's address, the number of online visitors it receives, and financial data. It also delivers ads, and Alexa can target the ads so they only appear when the user is visiting designated Web sites.

Amazon.com, for instance, bought ads to appear by a list of other book-related sites, like barnesandnoble.com, the U.S. Library of Congress, and various campus bookstores. So when an Alexa customer logs onto barnesandnoble.com, a small ad for Amazon appears at the bottom of the screen. Click that ad and it becomes quite big, superimposed on top of the barnesandnoble page.

``It's as close as you can get to putting an ad on somebody's front door," explains Bruce Gilliat, Chief Operating Officer of Alexa, which has an audience of about 1.5 million Internet users.

Gilliat also says the Alexa toolbar provides a way to get a company name on some of the sites, like the Library of Congress, that do not accept ads. Because the ad is linked to the Alexa toolbar, it is not considered to be actually running on the Web site, even though it appears on the same screen.

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Search News

Feb 10 | Feb 09 | Feb 08 | Feb 07 | Feb 06 | Feb 05 | Feb 04 | Feb 03 | Feb 02 | Feb 01

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Questions or Comments

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Sign in
Free E-mail

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NEWS SUMMARY
U.S.
WORLD
BUSINESS
Small Business
Personal Finance
Market Details
The Sectors
Mutual Funds
Raw News
TECHNOLOGY
SCIENCE
HEALTH&LIVING
TRAVEL
ESPN SPORTS
ENTERTAINMENT
WEATHER.com
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Net Ads Really Focused

Service Allows Firms to Advertise on Competitors. Sites

REUTERS

PALO ALTO, Calif, Feb. 10 — Amazon.com would not have much luck hanging an ad in the window of a Barnes & Noble store. But it has managed to place online ads so that they pop up on the computer screen right on top of the barnesandnoble.com Web site.

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Talk about targeted advertising. Internet retailers now have a way to advertise right in their competitors' virtual store fronts — without being accused of trespassing.

Ad Services Catches On

The unusual service comes from Alexa Internet, a free Web navigation business that has attracted more than 100 advertisers including e-commerce heavyweights like Amazon.com and CDNow, since it began selling ad space last year.

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The toolbar delivers statistics on different Web sites, like a company's address, the number of online visitors it receives, and financial data. It also delivers ads, and Alexa can target the ads so they only appear when the user is visiting designated Web sites.

Advertise on a Wide Category

Amazon.com, for instance, bought ads to appear by a

SUMMARY

Alexa Internet gives users info on Web sites they search, but it also allows advertisers to pop up ads — even on top of competitors' sites.

STOCKS & FUNDS
◉ By Name
○ By Symbol
GET QUOTE

WEB LINK
Alexa Internet

"It's as close as you can get to putting an ad on somebody's front door."
Bruce Gilliat, Alexa Internet CEO

EMAIL ABCNEWS.com
SEND PAGE TO A FRIEND
TOOLS AND HELPERS

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UP

Selling Power
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10 Times/Year
FEBRUARY 15, 1999
Bacon's

KNOWLEDGE AMAZING NUMBERS™

Edited by Anne Beals

More than 54 million Americans are expected to travel abroad this year.
(Source: *Newsweek*)

EXPANDING BOARDERS

In 1991-92 the population of US boarding/day schools was 30,693; in 1997-98 it was 35,062, an increase of nearly 15%
(Source: *The Exeter Bulletin*)

New York City hauls 27,000 tons of waste to its Staten Island landfill each day.
(Source: *Discover*)

TYING UP THE WEB

beaniemom.com, a Web site devoted to Beanie Baby news, gets 450,000 hits a day.
(Source: *Fortune*)





The average depth of the oceans is 10,000 feet with trenches that drop to 30,000 feet. That is also the average cruising altitude of jet planes above the earth.
(Source: *Discover*)

ABSENT MINORS

A full 75% of US households have no children under 18.
(Source: *The American Spectator*)

Earth's circumference at the equator measures 24,302 miles.
(Source: *The Cambridge Factfinder*)

LOADS OF ROADS

China had a road system of 20,000 miles by the third century B.C.
(Source: [illegible])

In America 50 percent of all deaths from disease are due to cardiovascular causes.
(Source: *CNN*)

DIVERSIONS

Forty-seven percent of business people traveling on corporate jets are not top executives but are likely to be from such diverse departments as project management, sales, engineering and accounting.
(Source: National Travel Association)

The residents and businesses of New York City's Manhattan Island use 1.3 billion gallons of water per day.
(Source: *Discover*)

COST OF LIVING DECREASE

In 1954 a color TV (if you could find one) took 562 hours to earn, today, 23 hours. In 1919 a chicken took 2.6 hours to earn; today, .24 hours.
(Source: *Money Magazine*)

There are 1.5 million new Web pages published



per day. Every day there are 186 new books published.
(Source: Alexa Internet and R.R. Bowker Co.)

Online
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FEBRUARY 1999
Bacon's

A Report from 1998 ONLINE



The ONLINE WORLD Conference and Exhibition,

held last October at the Washington Hilton and Towers, offered attendees a tightly packed three-day program with a solid assortment of six conference tracks.

Most notably, each day featured an especially informative and entertaining highlight, in a successful effort to enhance the conference buzz. Online Inc. offered popular general sessions each morning. Close to a thousand attendees, amounting to standing-room-only attendance, gathered in the International Ballroom to hear Brewster Kahle's keynote address, the Industry Announcements, and a first-ever CEO Industry Panel.

MONDAY

The Keynote

Monday's Opening Session began with Brewster Kahle's *Keynote Address*, entitled "Datamining the Internet for Quality Content." Kahle, Alexa Internet's cofounder, warned that the Web has reached "critical mass," and called librarians to task with the announcement that, "it is now time for librarians to build a digital library." Kahle estimates that there are about ten million people authoring for the Web, churning out a constant flow of content areas, doubling the Web's size every eight months—often with quality a mere afterthought.

For those concerned with cataloging and arranging information, this is a unique era. Kahle explained that the Web represents a historically unconventional collection of information in that it consists of "materials that started out in digital form, live in digital form, and die in digital form." He suggests that librarians should not just organize what already exists, but help create it. To do this, he listed the five characteristics of the ideal digital library:

- Collection with selection
- Easy access
- Organized materials
- Preservation of the materials
- Aid to patrons

With that, Kahle graded the Web's current progress and found only one of the five characteristics evident. Which one? Access is certainly free and open. Of the rest, Kahle offered progress on two of the components, organization and preservation. Thanks to Alexa, shareware that integrates with your browser, Web sites are beginning to be categorized by metadata and a peer-review ratings scheme. The traditional cataloging structure, Kahle says, won't translate smoothly into the new digital structure. Alexa also sends out robots that crawl through Web sites and archive the content—multimedia and all. What this accomplishes, and Kahle admits that this is on a very basic scale so far, is the ability to offer an out-of-print Web page service. Presumably searchers could send in a request for a particular piece of information that had been archived before its host site changed content.

Since Kahle could not come up with any evidence of progress on the fronts of selection and aid to patrons, he left us with a score of one definite accomplishment out of five, and two points of slight progress made toward a digital library.

TUESDAY

Industry Announcements

The sixth annual ONLINE WORLD Industry Announcements Session featured nine

17th Annual Information Authorship Awards



The 1998 Information Authorship Awards, sponsored by The Gale Group, were presented by George Plosker, Director of Client Services, to the following authors:

- **Walt Crawford** was the author of the *ONLINE* best article award for "Paper Persists: Why Physical Library Collections Still Matter." Susanne Bjørner and Bill Mickey accepted the award on his behalf. →

← **Greg Notess** captured the Best Columnist award for *ONLINE* and *DATABASE* magazines for his On the NET column.

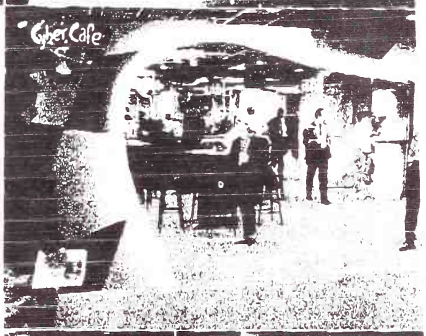
← **Erik** and **Steve Arnold** won the Hunt DATABASE article award for "Push Technology: Driving Traditional Online into the Corner."





WORLD









The ONLINE WORLD Exhibit Hall was busy with information professionals learning about new products and services, and the LEXIS-NEXIS CyberCafe was especially popular among attendees for checking email or browsing the Web.

new product announcements, each squeezed into a six-minute time allotment. Most of the announcements came from familiar companies, with one newcomer added to the bunch.

LEXIS-NEXIS announced the addition of its Universe product to its collection of databases, a Web interface that allows easy end-user access and flexible search features (Boolean, "more like this," and a new Focus option). Dow Jones unveiled Web Center, a collection of Web sites of use to business users chosen by Dow Jones editors. Tim Andrews also noted that Dow Jones made available the complete AP Newswire service, plus an archive of AP news stories. Dialog used its six minutes to talk about DialogClassic.com, that features Web-based access to command-mode Dialog, and announced DialogWeb 2.0. Derwent announced a new agreement with the U.S. Patent & Trademark office where Derwent provides access to its World Patent Index at the desktops of the USPTO.

Enfish, the lone newcomer presenter, previewed its Tracker Pro software that enables a user to track and search information across the desktop, LAN, intranet, email, and the Web. (*ONLINE* readers can download a full, limited-time demo version of Tracker Pro from the Online Inc. Web site at http://www.onlineinc.com.) The Institute for Scientific Information introduced its MetaMaps product and infonautics announced Electric Library Business Edition, a product geared to novice business users. EBSCO debuted EBSCO Online, a Web-based electronic journals subscription service. And finally, the Gale Group announced Knowledge-Manager, a Web-based service that integrates high-tech information from the Internet with Computer Select.

WEDNESDAY

CEO Industry Panel

ONLINE WORLD also marked the debut of what is likely to become an annual feature: the CEO Industry Panel. An instant classic, the panel proved to be as entertaining as it was informative. Between barbed, but good-natured exchanges, seven CEOs offered insight into the future of information technology and distribution. Present were WavePhore Newscast's Peter White, The Gale Group's Allan Paschal, Northern Light's David Seuss, LEXIS-NEXIS' Hans Gieskes, Dow Jones Interactive's Tim Andrews, Arnold Information Technologies' Steve Arnold, and The Dialog Corporation's Dan Wagner. Marydee Ojala, Editor of *DATABASE* magazine, guided the discussion with questions regarding the future of information delivery—including the roles of branding, enterprise-wide and desktop solutions, and multimedia as information—and how the Internet will affect all of it.

Exhibit Hall and Sessions

The Exhibit Hall featured a strong showing by the traditional companies, many displaying new Web-based product roll-outs. A number of new companies on the exhibit floor also managed to grab a fair share of the attention. LEXIS-NEXIS sponsored the CyberCafe and did a terrific job decorating it as a hip, contemporary-looking café with neon accents—a definite eye-catcher—and popular destination for attendees between sessions.

The show's conference sessions were broken out into six tracks—Practical Searching, Intranet Development, Trends & Technologies, Resource Management, Content Reviews, and Roundtable Discussions. Topics ranged from search techniques—Web-specific and otherwise—to intranet development to content-focused sessions on competitive intelligence, international information, and more.

—Bill Mickey

Entrepreneur's Home Office
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Bi - Monthly
2/99

FEBRUARY 1999

Bacon's

BY BRONWYN FRYER

Our guide to what's new, what's hot, what's helpful on the Web

False Alarms

WHEN YOUR brother-in-law sends you a dire warning about a new computer virus circulating on the Internet, he's doing you a favor, right? Wrong.

Believe it or not, many of the friendly warnings about viruses that threaten to bring our computers to their knees can wreak nearly as much havoc as the viruses themselves.

So-called "virus hoaxes" are just that: impostors, mere rumors of nonexistent computer viruses. Circulated over the Internet in the same way real viruses are, virus hoaxes are really just messages designed to strike fear into the hearts of computer users everywhere. And as is the case with true viruses, the people who create them are merely out to stir up mischief.

According to the Computer Incident Advisory Capability, the U.S. Department of Energy's response team, virus hoaxes and their first cousins, e-mail chain letters, "cost millions of dollars annually in time spent by countless people diverted from productive work, resources devoted to virus detection and defense, and bandwidth utilized that floods the Internet with useless and harmful e-mail."

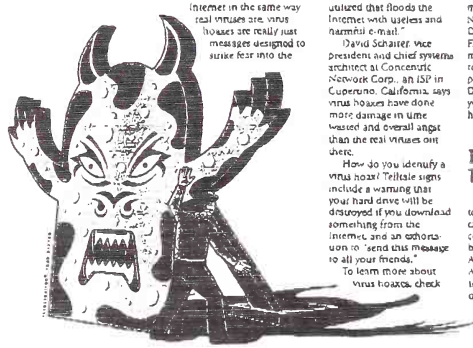
David Schaiter, vice president and chief systems architect at Concentric Network Corp., an ISP in Cupertino, California, says virus hoaxes have done more damage in time wasted and overall angst than the real viruses out there.

How do you identify a virus hoax? Telltale signs include a warning that your hard drive will be destroyed if you download something from the Internet, and an exhortation to "send this message to all your friends."

To learn more about virus hoaxes, check out the following Web sites:

- Charles Hymes' Don't Spread That Hoax, www.nonprofit.net/hoax/hoax.html
- Computer Incident Advisory Capability, http://ciac.llnl.gov/ciac
- Computer Virus Myths, http://kumite.com/myths
- Police Notebook of Virus Hoaxes, www.ou.edu/oupd/vhoaxhtm

To protect yourself against real viruses, purchase and load a good software utility such as Norton AntiVirus. (For more information on Norton AntiVirus, see "Hot Disks" on page 22.) Finally, if you suspect a message sent to you is really a virus hoax, don't pass it on. Just hit the Delete button—and tell your brother-in-law to do his, too.



I'll Take You There

MOVE OVER, Navigator and Explorer. A freebie called Alexa (www.alexa.com) is the coolest browser-booster around. As you surf the Net, Alexa—which appears as a tiny toolbar at the bottom of your screen—helps steer you to where you should go next. As you settle on a Web site, it lists

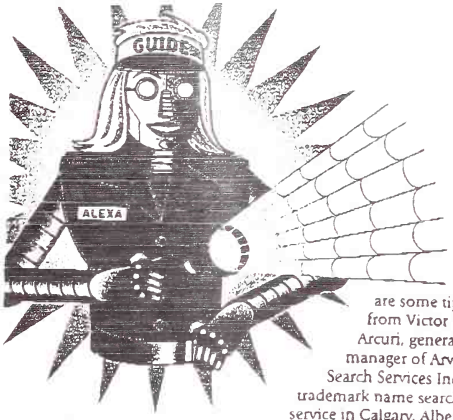


ILLUSTRATION © TODD DARLING

related sites you might want to check out. You can even find out the name and contact information of site owners, how often that site is visited and how fast it can turn pages.

Alexa is stuffed full of helpful tools. For instance, if you run across a page in which you see the message "file not found," Alexa can show you a previous version of the page. There's even a link to an online dictionary, and a thesaurus, too.

Claim Your Name

SO YOU want to set up shop on the Internet? Then take care in choosing a domain name. If you try to use a domain name that someone else already has dibs on, you may get slapped with a lawsuit. (McDonald's, Time-Warner, Hasbro and other companies have taken up the cudgel against those daring to use trademarked names as domain names.)

Unfortunately, if a domain name already belongs to someone else, you're out of luck. But here are some tips from Victor G. Arcuri, general manager of Arvic Search Services Inc., a trademark name search service in Calgary, Alberta, for securing your own domain name.

First, go to the U.S. Department of Commerce's Patent and Trademark Office Web site at www.uspto.gov, and run a search on the name to see if it's already in use. A number of trademark search services can also find out for you.

Once you choose an unclaimed domain name, you must register it and use it properly. Essentially, that means using the name as a trademark—and using your site to provide free services or information that helps others. Offering information about your area of expertise, articles, links to other sites or helpful hints signifies you're providing services to the public, and thus your use of the domain name is protectable, explains Arcuri.

Arcuri offers other rules for protecting your domain name. He recommends using it as an adjective rather than as a noun. For instance, if your company is Xyz Products, use the phrase "Xyz products" in all company correspondence—not "the products of Xyz." Also, unless your domain name specifically uses a lower case initial letter, always capitalize its initial letter—you can even use all capital letters. In addition, always use your domain name consistently and exactly as registered—and don't use the domain name in plural form. For example, you can say, "Buy two Xyz products and get one free," but you should not say, "Buy two Xyzs and get one free." Finally, make sure you always use a trademark symbol (™) with your name.



Post Haste

THE U.S. Postal Service (USPS) has been working on a plan to deliver electronic postage (called indicium) over the Internet, and it looks like the technology is close at hand.

The latest news: Last August, the USPS gave the nod to a California company called StampMaster (www.stampmaster.com) to begin test-marketing a new Net postage delivery service. The company is currently testing a software product that will print bar-coded postage stamps right at your desk, for a fraction of the cost of a postage meter.

To use the software, which StampMaster will offer for free from its Web site, you select the amount of postage needed and hit the Print button; the software then communicates with StampMaster's server. The server, which keeps track of how much money is on your USPS account, approves the purchase and sends a bar-coded indicium back to your computer. Then, presto: The indicium is automatically printed on your envelope.

StampMaster is "hoping for a national launch at the end of March," says company co-founder Jim McDermott. "We think it's going to be big." ■

Bronwyn Fryer writes about technology for Newsweek, C/NET and other publications from her office in Santa Cruz, California.

Jericho, NY

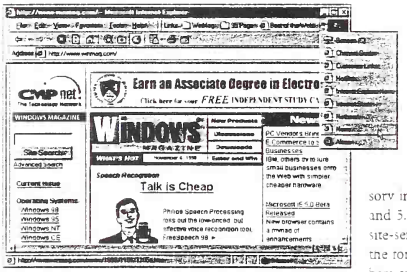
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FEBRUARY 1999

Bacon's

Test Drive: Internet Explorer 5.0

By Scot Finnie



Although IE 5.0 looks much the same as IE 4.0 on the surface, the new browser is riddled with dozens of small advances, such as this drop-down menu that makes it easier to access items on your Links bar.

Hop into the second beta of Internet Explorer 5.0, and the first thing you'll think is: This isn't so different. But as you begin to use the new browser, you'll find Microsoft has refined and streamlined many existing features.

The big news is an extensive makeover of the interface, including search, autocompletion, offline Web browsing, customizable toolbar and bookmark functions. The developers introduced new levels of customizability, ditched many of the annoyances from previous versions, simplified setup, provided more flexibility for multiple Internet connections and introduced invisible but important underpinnings for Web site developers. IE 5.0 also delivers a significantly upgraded version of Outlook Express.

After more than a month of all-day, everyday use, I've grown to like IE 5.0 immensely. It doesn't represent a paradigm shift; in fact, one of its advantages is that IE 4.0 users will feel instantly at home in IE 5.0. But when combined, the long list of fixes, refinements and improvements adds up to a browser that just works a lot better than IE 4.0.

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The search is over

Microsoft gave IE's Web search features a much-needed overhaul. A new Search Assistant helps you choose the right resources to search. The revamped Search bar sprouts buttons for New Search, Next Results Page, Customize Search Engines and Help.

However, IE 5.0 still lacks a few features found in Netscape Navigator. For instance, IE doesn't offer anything akin to Navigator's What's Related feature (supplied by Alexa), which displays hot links to Web sites related to the page you're viewing. But you can install the free Alexa (*http://www.alexa.com*) Web Accessory in Internet Explorer 4.0 and 5.0. Web Accessories are site-served content that take the form of custom Explorer bars, toolbar buttons or menu items. Alexa and the Bloomberg, MSN and *The New York Times* sites offer Web Accessories for IE 5.0.

IE 5.0 Beta 2 also lacks a true semblance of Navigator's Internet Keywords feature, which lets you type words or phrases—such as NASA, Ford or United Airlines—in the Location bar and pass through directly to those organizations' Web sites. Microsoft is still working on this area. Like Navigator, IE 5.0 will pass through the best Web site match in a keyword search; but because it has a two-paned interface with the Search bar, it may also show alternative Web sites there—a clear improvement.

Autocompletion is used extensively—and effectively—in IE 5.0. The new browser automatically corrects common typing errors in URLs. As you type, IE 5.0 makes an educated guess about what page

40 **366MHZ CELERON-BASED ENTERPRISE SYSTEMS:** Compaq Deskpro EN C366/6400/CDS, HP Vectra VE Series 8

51 **V.90 MODEMS:** 3Com U.S. Robotics 56K Faxmodem, Diamond SupraExpress 56e V.90, Hayes Accura 56K/V.90 Modem, Multi-Tech MultiModemZBA, Zoom 56Kx DualMode Faxmodem

395-407

54 PRODUCT REVIEWS

57 **Hardware:** Corporate desktops from Hitachi, Toshiba and NexTrend are feature-rich, network-ready and easy to maintain; ultraportability compromises the performance of tiny notebooks from MAG and Toshiba; Compaq, Micron and Systemax deliver powerful 450MHz desktops for the general-business user. Digital LCD displays from Princeton, Sceptre and ViewSonic dazzle with superior images; Canon's BJC-5000 ink jet supports seven-color photo-realistic printing; and devices from Dazzle and Adaptec simplify video capture.

68 **System Specs:** Our feature charts help you buy what you need.

70 **System Performance at a Glance:** How this month's systems stack up.

105 **Software:** Bigfoot's NeoPlanet 2.0 browser is slick, well-designed and a joy to use; Norton 2000 helps you solve potential Y2K problems for hardware and software; Diskeeper keeps your Windows NT system running smoothly.

113 **Product Reviews by OS:** Operating system support.

115 **The WinList:** Our recommended products.

you're trying to reach. It then offers a drop-down list of similarly worded URLs to select from. In hunting for matches, AutoComplete searches both your history and Favorites. It's a feature that can sometimes save more time than you'd expect.

Better browsing

IE had offline browsing before, but it was difficult to use. Now, it's a lot easier: To make a site available offline, you simply put a checkmark in the Add Favorites box.

beta preview

Microsoft has also added a smart local cookie technology that saves names, passwords, street addresses, e-mail addresses, user names and other details you've previously entered into Web forms. Then it offers this information to you on automatic pop-up menus on future Web forms. Unlike other browser cookies, no other computer is privy to this information.

More welcome improvements

Microsoft corrected many of IE 4.0's petty annoyances. First, since IE 5.0 isn't a shell update, it doesn't transform the look and feel of your operating system, which was a problem with IE 4.0. It doesn't include Active Desktop or IE 4.0's annoying Channels—although IE 5.0 can work in harmony with your existing Windows 98 or IE 4.0 installation.

My favorite fix in IE 5.0? The abridged status bar that appeared in IE 4.0 is gone. It wasn't large enough to display the full URL behind a link *before* you clicked it, something more experienced Web surfers found frustrating. I've always found IE's repetitive warning dialog boxes annoying. It's much easier to turn off these "features" in IE 5.0.

With IE 5.0, you can rename Favorites right on the Favorites menu by right-clicking them and choosing Rename. After you install IE 5.0, you'll find you can right-click to rename items on the Start menu and its submenus. In addition, when you save a specific page deep in a framed Web site as a Favorite, IE is smart enough to save the actual page you're on. And finally, Microsoft has included a Favorites import and export tool.

The process of managing Favorites still hasn't received enough attention. In fact, in some ways it has gotten worse. You still can't search them, still can't undo recent changes you made to them, and there's still no solid, dedicated tool for managing them. The new, dumbed-down Organize Favorites dialog box is less useful than it was before. For instance, you can't do anything else in IE 5.0 while Organize Favorites is open.

Setup and connections

Microsoft has improved the installation process by giving you greater choices about what to install. You can start with a 6.5MB to 7MB browser-only version of IE 5.0, which is smaller than IE 4.0. When you encounter a Web page that requires a new component, IE can automatically install the missing component. This feature is called Install On Demand.

The new Internet Control Panel is a welcome improvement. It adds support for multiple dial-up connections as well as a LAN connection. There's also an automatic detection capability for LAN connections and additions to the panel that lets you select default components.

98 95 NT

Internet Explorer 5.0

Bottom Line: This version is better in dozens of small ways, and it makes many common Web browsing tasks easier
Pros: Peccadilloes banished; new autocomplete and custom toolbar usability features; improved search functions; better dial-up controls; Outlook Express gets major revision
Cons: Organizing Favorites is still difficult; new search features were incomplete in this beta; new Connections dialog box could use further consideration
Price: Free download
Microsoft Corp., 800-426-9400, 425-882-8080. **WinInfo# #780**

Outlook Express enhancements

Finally, in version 5.0, Outlook Express gets a major upgrade, with a superb new Identity Manager for multiple users or identities. I know of no other e-mail program that does this better than the beta of Outlook Express 5.0.

Other major new features include junk e-mail filtering, a new Rules Wizard, extended rules, multiple signatures, offline news and e-mail capabilities, and Outlook 98 integrated contacts. Outlook Express 5.0 finally has all it needs to potentially supplant Eudora Pro Email as the Internet e-mailer of choice.

Where it stands

Internet Explorer 5.0 wasn't quite far enough along yet for us to make a full-fledged recommendation at press time. Based on experiences with this beta version, however, it looks like Microsoft has another winner on its hands. But Netscape has a return volley coming up, so the fracas will continue to be interesting.

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Article 1 Return to Headlines

Reviews
View From The Bunker
Almost Managed To Miss The New Browser
Oliver Rist

02/15/99
InternetWeek
Page 33
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Sometimes I'm so busy delving into arcane networking minutiae that I miss the bigger picture. No, I'm not talking about Monica Lewinsky's Liberty Bell hairdo, I'm talking about the fact that a third browser has finally entered the fray. And this one is slick enough to compete.

Bigfoot International Inc.'s NeoPlanet 2.0 is a nice little 2 MB download (www.neoplanet.com) that results in a cool new Web browser that crashes only as often as Internet Explorer does. Which is probably because it is based on the IE engine, with Bigfoot adding its two cents on the front end. It supports most of what IE does, including Java and scripting, with Bigfoot and Microsoft working on enhancements.

So what makes it different? One nonword: "customizability." You can change everything about this browser, including its look and sound. The product comes with 15 available schemes.

What makes it even more attractive is its built-in set of corporate-sponsored Web links. These are organized in toolbar formation, touching everything from news to shopping, money, sports and much more. This means that users can quickly configure NeoPlanet to act not only as a browser but as a truly personalized portal page, right down to its look, feel and sound.

Bigfoot's accounting department is happy because channel sponsors (the integrated Web links) pay an advertising fee that is supplemented with more ads in the browser face itself and, allegedly, a portion of goods sold via its interface. Users are happy because they're greeted with a wide array of information immediately at their fingertips that they can add to and customize.

NeoPlanet comes with an integrated e-mail reader, though we would have liked a news reader as well. Even cooler, the engine is connected to a context-sensitive Web link database that lets users hit a "What's Related" option to see a list of links relevant to what they're viewing at the moment. **Netscape** 4.5 has the same feature, and both it and NeoPlanet use the same source database from **Alexa** Internet.

While NeoPlanet doesn't offer many added features beyond e-mail-unlike **Netscape** with its support for news and Web page design-Bigfoot has gotten the jump on its competition in one way: grabbing market share for PC desktops. **Netscape** has tried this by automatically opening its browsers to the portal-like **Netscape** Web site, while IE tries something similar and touts its Active Desktop enhancement on top of that. NeoPlanet slips neatly between the need for a too-distant outside corporate Web site and the headache and invasion of Active Desktop on the rest of the PC's interface. You get to build whatever you like without resorting to an outside Web connection, and you get to keep it in the NeoPlanet box-not running amok on the system like Active Desktop.

Though the "channel" Web links seem a little busy, you can edit them out. If corporate desktops are Bigfoot's concern, I hope it adds a way to distribute a specific customization of the interface to a large number of systems without having to re-edit it every time. For small offices and power users, though, this is well worth the download.

Oliver Rist is contributing technical editor at InternetWeek and technical director at Grand Central Networks Labs. He can be reached at orist@cmp.com.

February 15, 1999

Article 6

Return to Headlines

ZDNet

Internet Apps.(free software)(Product Information)

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Web Utilities

You use the Internet every day, but to really take advantage of it you need the right insider tools. The place to get them? The Web, of course. You'll find can't-live-without search helpers, smart e-mail managers, utilities to speed surfing, spam killers, and plenty of programs for dressing up Web pages.

Web Browser

Internet Explorer 4.01, Microsoft

The Web starts here. Chances are you're already using the top-rated browser, which also happens to be free. It's fast, integrates seamlessly with Windows, and comes with excellent newsreader, conferencing, and e-mail apps.

Also consider . . .

Netscape Communicator Yes, you do have a choice. **Netscape** 's excellent browser does just about everything Explorer does--and finally it's free too.

Newsreader

Gravity, MicroPlanet

Before there was the Web, there were newsgroups. And these public bulletin boards are still thriving on the Internet. Gravity makes it a breeze to subscribe and unsubscribe to groups, and offers background image decoding and customizable rules for organizing and prioritizing groups and messages.

Also consider . . .

Forte Free Agent The easy way to get started with newsgroups.

Internet Search Tool

Copernic 98, Agents Technologies

Save yourself time and frustration with this indispensable search utility. It lets you search the entire Web or specific channels, including news, technology, business, and finance. It also surveys dozens of the top engines at once, then ranks the results so you can easily find what you're looking for.

Also consider . . .

FerretSoft LLC WebFerret The Web's top search engines are just a click away. WebFerret adds an entry to your Windows Start menu so you can search without even loading your browser.

E-Mail Manager

WINDOWS MAGAZINE
Jericho NY

Circ - 667,748
Monthly

FEBRUARY 1999

Baton's

Reviews

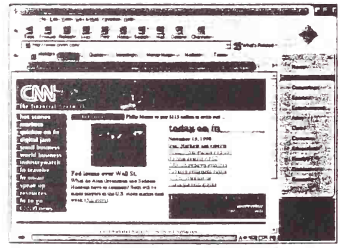
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Browse the Web Your Way With NeoPlanet

When I took Bigfoot's NeoPlanet 2.0 browser for a test drive, the word "slick" came to mind. This new shell program for Internet Explorer is fun to use, well designed and downright ingenious. So much so, in fact, that we're placing it on our WinList.



NeoPlanet can look very different depending on the scheme you choose. Switching from one to another of the 15 or so initial schemes takes about 10 seconds.

So, why would you use NeoPlanet 2.0 over Internet Explorer or Netscape Navigator? Well, it's just more customizable, for one thing. You can change the browser's entire look, feel and sounds with 15 schemes. Whichever look you choose, NeoPlanet has a snappy feel, and its interface offers excellent controls. This second version is so different from the abysmally designed original that just about the only thing the two share is a concept.

More than a pretty face

NeoPlanet comes with a built-in set of channels that make it half browser, half portal. The 25 or so core channels—which include News, Money and Computing—are presented in a logical, accessible way. Each provides a good selection of links from a wide variety of top-notch Web content builders.

Customization and personalization are a big part of what makes the program attractive. Using the built-in Channel-Designer, you can build your own channels or modify existing ones. NeoPlanet is also surprisingly complete and self-sufficient. It includes integrated multiple folder-based e-mail that's simple and very usable, though I would like to see support for rules, multiple identities, stationery and news reading. The e-mail functions work with pre-existing accounts of any type, including Web-based e-mail accounts. You can also opt to use any local e-mail client software, or import settings from installed clients.

The ingenious part

In a quiet, smart sort of way, NeoPlanet is sneaking in the back door on the emerging second-generation battle for Internet Desktops. Like Communicator 4.5 and Internet Explorer 5.0, NeoPlanet provides Internet database-enhanced functions. For example, the NeoPlanet browser has a What's Related menu of context-sensitive links to Web sites similar to the one you're currently viewing. The feature is virtually identical to the What's Related menu in Navigator 4.5, and both are hosted by the Alexa database. And like both Navigator and IE, it lets you input plain-English entries in URL bars when you don't know a specific URL.

One to watch

NeoPlanet makes money because it takes a piece of the advertising fees and a small piece of the revenue made from the sale of goods through its Shopping channel. The more the browser gets distributed, the greater its revenue. The idea is for Bigfoot to create the quintessential morphing browser that businesses, associations, kennel clubs, rock bands and so forth worldwide can use, brand with their own logo and even add channels. It's an intriguing business model, and we look forward to seeing whether it flies.

Because it harnesses Microsoft's componentized browser, the NeoPlanet download (*http://www.neoplanet.com*) is only about 1.7MB. NeoPlanet renders HTML, runs Java and scripts, and in general performs as well as the version of IE already installed on your system. That is, we found it fast, reliable and ready to take to the Internet. If ever there was a browser for the masses, NeoPlanet is it.

—Scot Finnie

98 95 NT WINLIST

NeoPlanet 2.0

Bottom Line: If you like looking at new browsers, don't miss the chance to try this one
Pros: Fun to use; easy to customize; includes integrated e-mail; snappy performance
Cons: E-mail is light on features; can't drag URL from Address bar to your Desktop
Price: Free download
Bigfoot International, 212-262-1118, fax 212-262-1079. **WinIo #751**

Eudora Light, Qualcomm

Who could live without e-mail? That's why you need this free version of the popular Eudora e-mail manager. It lets you sort mail by folders, automatically apply filters to incoming mail, and easily send and receive attachments. Plus it has a great address book.

Also consider . . .

David Harris Pegasus Mail An excellent e-mail manager that'll keep your in-box in check.

Internet Communications

ICQ, Mirabilis

Forget e-mail. Why not chat over the Web instead? ICQ (pronounced "I seek you") is the best there is in Internet communications. Find other people who share your interests, chat, or send them e-mail- like messages. ICQ even hooks to videoconferencing apps.

Also consider . . .

Hilgraeve DropChute+ This unique program lets you connect directly to others on the Web and transfer files to them or chat.

Internet Utility

Alexa , **Alexa** Internet

Finally! An effortless way to find great Web sites. When you're at one site, **Alexa** offers a list of related sites. Simply click to jump to it. You also get information about any site, such as who owns it and how fresh the content is.

Also consider . . .

Northwest Performance NetScanTools Here are all the Internet geek tools you could wish for rolled into one. Ping sites to see if they're live, find out who owns domains, and much more.

Web Publisher

HomeSite, Allaire

The one Web publisher that pleases everyone. Professionals like it because you can type in code directly and it supports frames and tables. Beginners love the wizards and graphics.

Also consider . . .

CoffeeCup HTML Editor++ 98 Experienced HTML coders will want to try this excellent publisher.

Web Publishing Utility

Software Linkbot, Tetranet

Broken links, missing images, and old content are the bane of any Web publisher. Linkbot solves these problem without a lot of grief.

Also consider . . .

Ulead GIF Animator The easy way to create animated GIFs for your Web site. It even converts AVI and QuickTime files to GIF animations.

Spam Killer

Spam Exterminator, Unisyn

Delete, delete. . . . Here's a better way to nix spam from your in- box. Exterminator sniffs out unsolicited mail from over 3,000 known spammers and automatically kills messages from them.

Also consider . . .

Contact Plus Spam Buster Another smart way to detect and purge junk mail.

Cookie Killer

Cookie Pal, Kookaburra Software

Careful. You're being spied on. But fear not, because Cookie Pal keeps tabs on who's watching you. It cleans cookies off your system, then alerts you when a site tries to send you a new one.

Also consider . . .

Webroot Software Cache and Cookie Washer Zap cookies, and automatically purge your Internet cache files, address bar drop-down menu, and history list.

File Transfer Utility

WS_FTP Professional, Ipswitch

Stop! Don't download a thing until you get this utility. Its Explorer-like interface makes it easy to get started, and you'll love the ability to send and receive multiple files at once as well as resume an interrupted download.

Also consider . . .

Lincoln Beach Software Download Butler The easy way to keep track of all the goodies you download. It categorizes, unzips, and even scans for viruses.

Offline Utility

BlackWidow, SoftByte Laboratories

Bring the Web with you--no Net connection required. Download entire Web sites, individual pages, or selected files to review later.

Also consider . . .

askSam SurfSaver Save Web pages, then store them in searchable folders.

Internet Media Player

RealPlayer G2, RealNetworks

There's more to the Web than text and pictures. With RealPlayer you can listen to Internet radio stations and music, watch TV and video clips, and view animations.

Also consider . . .

Microsoft Windows Media Player The player you need to view animations on many popular sites.

Dial-Up Utility

ConnectPal Professional, connectpal.com

Take control of your Web connection. ConnectPal automatically redials busy numbers and logs you on, automatically launches programs after you've connected, and keeps your Web connection alive.

Also consider . . .

Vector Development Dunce Do it for me: Dunce will automatically redial, log-in, and connect at your request.

Display as: Full Article

Return to Headlines

Format For Printing

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Article 3 Return to Headlines

A New Browser (Utility) Emerges.(Evaluation)
Peter Jasco

02/01/99
Information Today
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Peter Jacso is associate professor of library and information science at the Department of Information and Computer Sciences at the University of Hawaii. He won the 1998 Louis Shores--Oryx Press Award from ALA's Reference and User Services Association for his discerning database reviews. His e-mail address is jacso@hawaii.edu.

NeoPlanet has several great features that IE and Navigator should, too

Developers of Internet browsers- with the possible exception of Opera-have mostly given up their efforts to compete with Microsoft Internet Explorer (IE) and **Netscape** Navigator. While Microsoft and **Netscape** are slugging it out, the smaller developers must have felt that it was better to stay out of the ring than get knocked out. Microsoft has been quickly catching up with **Netscape** , and, by the end of 1998, the two had roughly equal market share. America Online's buyout of **Netscape** may slow Microsoft's gains on the **Netscape** browser if AOL does not destroy Navigator with this acquisition-as it did when it purchased some other software. (For more on this, see Robin Peek's Focus on Publishing column, page 30.)

On the other hand, the number of thirdparty products that require Internet Explorer 3.x or better grew in 1998. However, none of them seems so important as BigFoot International, Inc 's NeoPlanet browser utility. It is not a browser by itself, as it cannot run without core elements of Internet Explorer or Windows 98-which has the same core Internet browsing code elements-installed, but it appears as one to the end users. The fact that NeoPlanet requires IE merely to be installed (and to have added some features during installation) but not running reinforces the impression that NeoPlanet is a browser on its own. In my opinion, it has a very pretty interface with lots of brain and charisma. I found NeoPlanet so attractive and smart that ever since it has been installed, I've made it my default "browser"- many of ITs readers would do well to do the same. I'll explain why.

A Lightweight Add-on

NeoPlanet charms the user from the moment it's downloaded. It is less than 2 MB in size, so even on a 28.8-Kbps modem it takes less than 20 minutes to download (under normal circumstances). Installation is a breeze, or I should say Snap, as NeoPlanet integrates this fairly new Web portal and then some. It takes about 4 to 5 minutes to set up from the downloaded .exe file. The clean and slick interface is perhaps love at first sight (see Figure 1), but one of the most attractive and unique features of this software becomes evident only after you start using it. The key to its appeal is how you can personalize the whole interface to your liking.

NeoPlanet offers channels as subject guides/directories-as most other portal sites do-but with several essential differences. The channel pane on the right side of the screen remains visible. On other portal sites, one may feel lost as one goes deeper into subcategories. Not so in NeoPlanet. With the help of the channel pane, it is so easy to trace back your steps that even Hansel and Gretel would endorse it. When you click on a channel such as Travel, the home page of Preview Travel- the primary travel site (in the judgment of Snap's editors, anyway)-shows up in the main pane. The subcategories of the Travel Channel (Online Agents, Guides, Travel Writing, and Maps) appear above the main pane along with the name of the specific preferred sites recommended by the editors of Snap, such as Expedia, Travelocity, and Flifo. (See Figure 2.) You may rearrange these sites to your preference, as well as add and delete sites from the channel.

Different Strokes, Different Folks

If you feel that the channel pane or the subcategory bar or the site bar take up too much space on the screen, you can make them disappear with a click of the mouse- and then call them back with another click when you need them. The top bars also can be shrunk or enlarged. This is very intuitive, thanks to the rollover technique that displays an informative label as you pass your cursor over the navigational buttons and gizmos.

The big deal is, however, that you may customize the content of the channel pane at every level: the channel choices, the subcategories, and the site list. If you don't care about certain categories, subcategories, or specific sites using the Channel Designer feature, you may remove any elements in the channel pane, as well as add new ones down to the site level. I have added a channel for some of my favorite radio stations and another one for professional journals. (See Figure 3.) Editing is as intuitive as in IE's Favorites collection, but your favorite channels and subchannels remain visible as long as you want them to. During installation, NeoPlanet gets your cookies, bookmarks, and favorite sites defined in both IE and Navigator. Just click on them from the pull-down Favorites menu and drag their URLs to the appropriate NeoPlanet channel or subchannel.

There is a Channel Archive, so if you change your mind and want to reinstate a channel that you had removed it can be invoked from the Channels la Carte list. The archive also includes a Local Channels list (currently only for a dozen metropolises) and a User Channels list, if you'd prefer the choices of others who've shared their favorites with BigFoot. You may also exchange channels directly with others by simply importing and exporting channel files.

Schemes are additional interface-design elements. They define the look and feel of the interface-using different icons, background, font styles, and colors-but do not change the locations of the components on the screen. Beyond the default interface, there are over a dozen other predefined ones in the Scheme Archive. Most of them are excellent by anyone's standard and provide a refreshing choice when you get bored with the default interface. (See Figure 4.) During the holidays alone there were four extra schemes: Christmas, Xmas, Hanukkah, and Kwanzaa. There certainly will be many more schemes to come as users are encouraged to design and submit their own so that BigFoot may include them in the Scheme Archive. Schemes also can be directly imported and exported among users.

Built-in Goodies

NeoPlanet brings not only a refreshingly attractive and intuitive interface, but also adds a lot of extra functionality borrowing from the current and upcoming versions of IE and Navigator. In the rightmost part of the toolbar, you can spot the What's Related button. Clicking on it will list (in an insert window) sites that are considered related to the one you are looking at from **Alexa** 's Related Links database. This is a feature from **Netscape** Communicator 4.5 that went into public beta testing at the end of 1998.

NeoPlanet also installs its own e-mail client, so you don't need to invoke a separate e-mail program. This can be a godsend for those who have relatively little RAM. The e-mail program has all the trimmings of the best of this genre, including address book, spell checker, file attachment, user defined folders, saving in draft format, selection of font type, color, balding, italicizing, underlining, and text-centering.

Enhanced browsing offers great convenience. For a starter, it offers autocompletion of URLs just as the latest Navigator and IE versions do. It is enough to type in "infotoday"-NeoPlanet will add the "http:// www." prefix and the ".com" suffix. If the site is not found, it will automatically try the "net" suffix as Navigator does. So if the user enters "emediapro" for E-Media Professional's site, it will be found even though it's "http://www.emediapro.net." NeoPlanet also offers two other options. If the site is still not found, it will use the RealName database and look for Web sites of companies and organizations whose names match the search string entered, even if its core URL does not. This is good for those who enter "onlinetoday" instead of "ont," the core of the full URL: "http://www.ont.com." And if it is still not found, NeoPlanet will do a keyword search of the words entered in the URL cell. These options can be enabled or disabled by the user, and Web-site owners must register with RealName for th is service. The cost for the site owners is $100 for a year and well worth it. The beauty of NeoPlanet is that the RealName look-up need not be user-initiated: It is automatic unless the user specifically turns it off.

It is disappointing that NeoPlanet did not pick another nice feature from Navigator that is not in IE: print preview before actual printing. This is essential to avoid wasting paper printing all those Web pages that have just one or two (probably irrelevant) lines more than can fit on a single (paper) page. On the bright side, NeoPlanet offers users the ability to limit a Web search to some predefined domains (News Stories, Shopping, Software, Business Data, etc.) similar to the beta version of IE 5. Clicking on the domain label News, the search with the word "Hawaii" will be restricted to sites that are classified as news sites. Clicking on the Travel domain button will restrict the search about Hawaii to sites that are travel-related and that discuss Hawaii. Oddly, the domain limiting did not work when the Movies domain was selected, even though the search is automatically submitted to MovieFinder (which has 16 movies with Hawaii in the title)—and this you cannot customize. Making Internet Movie Database the default search site would be far better as it has more than twice as many for this search example as MovieFinder had, and is a more comprehensive database, in my opinion. The Advanced Search option invokes a branded version of Inktomi, the software used by Microsoft's portal and HotBot, among others. It is more than icing on the cake that NeoPlanet has a built-in modem-booster code.

All in all, this is outstanding software that costs nothing. It found a niche that both of the two superbrowsers neglected in favor of other developments: an attractive, highly customizable, and very intuitive interface. Together with its content and substance enhancements, NeoPlanet turns out to be an excellent tool set. It is soon to be available for Mac users and on a version that piggybacks on Navigator.

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Article 2 Return to Headlines

Alexa 3.0
Geoff Bowers

02/01/99
ABIX (Australasian news abstracts)
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Source: Internet.au Feb 1999 p74 (short).

A new software utility for Web browsers has hit the Australian market as at February, 1999. **Alexa** 3.0 is an intelligent program that adds an additional toolbar to the Web browser. The toolbar provides information such as speed, traffic, popularity and how often the content is updated. The software can be downloaded free of charge over the Internet and is also included in **Netscape** Communications Corporation's latest browser software release; Geoff Bowers; inset.

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Alexa

Article 1 of 7

FISCAL 2000 LEGISLATIVE APPROPRIATIONS
JAMES H. BILLINGTON

02/10/99
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Statement of James H. Billington The Librarian of Congress before the Subcommittee on Legislative Appropriations Committee on Appropriations U.S. House of Representatives Fiscal 2000 Budget Request

February 10, 1999

Fiscal year 2000 is a milestone year for the Library of Congress -- a Year of Great Celebration and Transition. On April 24, 2000, the Library will be 200 years old, the oldest Federal cultural institution in the country. By creating and sustaining the world's largest and most diverse collection of knowledge and mandating it to serve other libraries and the nation, the Congress of the United States has been quite simply the greatest patron of libraries in history.

The Congress has continued to support the Library's traditional services as well as its new leadership role in delivering free electronic information to the nation. The Library's Internet site now receives more than three million electronic transactions every working day. This phenomenal usage nearly doubles that of the previous year.

The Library's mission is to make its resources available and useful to the Congress and the American people and to sustain and preserve a universal collection of knowledge and creativity. To fulfill this mission, the Library has amassed an unparalleled collection of more than 1 1 5 million items, a superbly knowledgeable staff, and cost-effective networks for gathering the world's knowledge for the nation's good.

People and institutions in the information world are facing historic challenges. The world of librarians and libraries is rapidly changing, and the Library of Congress is both leading and embracing change to sustain its role as a trusted knowledge navigator and pathfinder for America's unique system of providing free Public access to usable information. We are making the transition from a model of receiving, Processing, and serving primarily artifactual materials (e.g., Paper books and serials, films and tapes) to a model of also receiving, processing, and serving the rapidly increasing number of materials available only in digital form (see attachment #1). We are also making the transition from a model of primarily serving people over age 18 who use our collections in our reading rooms in Washington, D.C., to a model of serving people electronically everywhere, regardless of age -- and contributing directly to K-12 education with the American Memory/National Digital Library program (Attachment available on hard copy only).

The Bicentennial of the Library in fiscal year 2000 will be a decisive time for developing integrated automated systems and for initiating staff succession programs to sustain and enhance the Library's critical role as a trusted knowledge navigator for the Congress and the nation. The Library's proposed fiscal year 2000 budget supports the Library's mission and strategic plan, which charts our course into an increasingly electronic future. Libraries are a link in the human chain that connects what happened yesterday with what might take place tomorrow; they are the base camps for new discovery in the Information Age; they must include and integrate both traditional and digitized materials.

The Library's budget request totals $383.7 million in net appropriations and $33.1 million in authority to use receipts -- a net increase of 5.5 percent ($20 million) over fiscal 1999. Most of this increase ($16-6 million) is needed simply to fund mandatory pay raises (driven largely by the January 2000 pay raise of 4.4 percent) and unavoidable price-level increases; $3.4 million (of the $20 million total increase) is needed to meet critical growing workload increases (net of program decreases).

Growing workload decreases total $8.25 million, including a $4.8 million decrease resulting from higher copyright fee receipts, a $2.25 million decrease resulting from two no-year projects (i.e., Meeting of the Frontiers and Lewis and Clark Bicentennial) that were funded in fiscal 1999, and a $1.2 million decrease resulting from a planned reduction in the Integrated Library System project costs.

Growing workload increases totaling $11.6 million are offset by the decreases of $8.25 million which result in a net increase of $3.4 million. Major increases include: $4.8 million for automation building blocks; $1.6 million for a staff succession program; $1.4 million for improved collections security; $.7 million for the Copyright registration process (funded by receipts); $.7 million for the Law Library; $1.5 million for a multi-year James Madison building workstation modernization project; and $.3 million for operational funding of the National Audio-visual Conservation Center.

-Early History-

The Library of Congress is a living monument to the remarkable wisdom of the Founding Fathers who saw access to an ever-expanding body of knowledge as essential to a dynamic democracy. The Library's three buildings are named for Thomas Jefferson, John Adams, and James Madison. With the support of these Presidents, the Congress established the Library in 1800 as soon as it moved to the new capital city of Washington and established the Joint Committee on the Library as the first Joint Committee of the Congress in 1802.

Jefferson, in particular, took a keen interest in the new institution. After the British burned the Capitol and the Library during the War of 1812, Congress accepted Jefferson's offer to "recommence" the Library and purchase his multi-lingual 6,487-volume collection (then the finest in America) at a price of $23,950. It contained volumes in many languages on everything from architecture to geography and the sciences. Anticipating the argument that his collection might seem too wide-ranging for Congress, Jefferson said that there was "no subject to which a Member of Congress might not have occasion to refer."

Jefferson's ideals of a "universal" collection and of sharing knowledge as widely as possible still guide the Library. With Congressional blessing and support, the Library has grown,to serve the Congress and the nation more broadly in ways that no other library has ever done -- largely as a result of four milestone laws: (1) the copyright law of 1870, which stipulated that two copies of every book, pamphlet, map, print, photograph, and piece of music registered for copyright in the United States be deposited in the Library; (2) the 1886 authorization of the first separate Library of Congress building that contained openly accessible reading rooms and exhibition space for the general public; (3) the 1902 law that authorized the Library to sell its cataloging records inexpensively to the nation's libraries and thus massively help to subsidize the entire American library system; and (4) the law in 1931 that established the program in the Library to create and supply free library materials to blind and physically handicapped readers throughout the country. Congress thus established the basis both for the continued growth of the collections and for the extension of the Library's services to citizens everywhere. In 1914, Congress created the Legislative Reference Service (LRS) as a separate entity within the Library of Congress to provide specialized services to "Congress and committees and Members thereof." In 1946, the Congress granted LRS further statutory status within the Library and directed it to employ specialists to cover broad subject areas. Congress renamed the LRS the Congressional Research Service (CRS) in 1970 and enhanced its analytical capabilities by defining its policy role for the Congress and emphasizing research support to the committees of Congress.

More recently, a series of Congressional statutes have created within the Library of Congress the American Folklife Center (1976), the American Television and Radio Archives (1976), the national Center for the Book (1977), the National Film Preservation Board (1988), and the National Film Preservation Foundation (1996) -- further extending the Library of Congress' national role.

-The Library of Congress Today -

The core of the Library is its incomparable collections -- and the specialists who interpret and share them. The Library's 115 million items cover more than 530 miles of shelf space and include almost all media through which knowledge and creativity are preserved and communicated.

The Library has more than 27 million volumes, including 5,700 volumes printed before the year 1500; 112 million photographs; 4 million maps, old and new; 2 million audio recordings; 800,000 motion pictures, including the earliest movies ever made; 4 million pieces of music; 50 million pages of personal papers and manuscripts, including those of 23 Presidents of the United States as well as hundreds of thousands of scientific and government documents.

New treasures are added each year. Recent acquisitions, to name a few, include: papers of Supreme Court Justice Ruth Bader Ginsburg covering her career before appointment to the Court, an addition of 2,000 items to the papers of Supreme Court Justice William J. Brennan; a collection of 500,000 items of Pamela Harriman, diplomat and political figure; the Martha Graham Archives, documenting the contribution of this pioneer in American dance; 32,000 papers of poet Edna St. Vincent Millay; additional organizational papers to collections already at the Library of the National Urban League and NAACP National and Washington Bureau; a large addition to the papers of architect I.M. Pei; sixty drawings of Pat Oliphant, the political cartoonist; text, images, and audio files representing a full "snapshot" of the public World Wide Web (some 500,000 Websites) donated by **Brewster Kahle**, President and Founder of **Alexa Internet**; three rare portraits of Georgia O'Keeffe by master photographer Alfred Stieglitz, and a Map of Philadelphia from 1752 with the first illustration of Independence Hall.

Every workday the Library's staff adds approximately 10,000 new items to the collections, after organizing and cataloging them, and finds ways to share them with the Congress and the nation -- through on-line access across the nation, through in-person access in the Library's reading rooms, and through cultural programs that feature the Library's collections and reach across the country.

Major annual services include delivering more than 530,000 congressional research responses and services, processing more than 640,000 copyright claims, cataloging nearly 300,000 books and serials, and circulating more than 22 million audio and braille books and magazines to blind and physically handicapped individuals all across America. The Library also provides free on-line access, via the Internet, to its automated information files, which contain more than 75 million records -- to Congressional offices, Federal agencies, libraries, and the public. The Library of Congress programs and activities are funded by four salaries and expenses (S&E) appropriations, which support congressional services, national library services, copyright administration, library services to blind and physically handicapped people, and management support. A separate appropriation funds furniture and furnishings.

- Automation Building Blocks -

The Library is putting in place automation building blocks that will ensure a solid foundation for continuing into the next century its historic leadership role of delivering information services to the Congress and the Nation, setting bibliographic standards (saving libraries hundreds of millions of dollars by supplying them with bibliographic data), and providing free electronic access to knowledge and information for life-long learners everywhere.

Key automation building blocks for the future include:

- Integrated Library System (ILS) - The ILS is scheduled to be operational at the beginning of fiscal year 2000 and will change the work patterns for more than half the Library's staff. The fiscal year 2000 budget incorporates a planned decrease of $1,197,000 (from $3,544,000 to $2,347,000), which is $270,000 less of a decrease than projected two years ago in the original budget because of higher software maintenance costs. The ILS will coordinate and make more efficient all the Library's basic functions, such as acquisitions, cataloging, and research and loan services but will require a major redirection of resources to implement. As a result, the Library projects a slight short-term increase in its arrearage during fiscal years 1999 and 2000. The Library expects that any major savings from the ILS would begin to accrue at the end of fiscal year 2000 and begin appearing in the Library's fiscal-year 2001 budget.

- Electronic Resources Information Project - An important phase of the transition to an increasingly electronic future is the development of an approach to handling digital materials. The Library is requesting a fiscal 2000 increase of $964,764 for an initiative that consists of two parts: (1) a three-year project, at $520,836 per year, to develop and implement policies and procedures and the access management system necessary for incorporating into its collections and services the electronic products the Library acquires from others via copyright deposit, gift and purchase, and (2) a permanent base increase of $443,928 to fund the technical staff necessary to support the handling of electronic services in the custodial divisions.

Just as the National Digital Library Program provided national leadership for the transition to a digital environment through conversion of archival materials delivered on the Internet, the Electronic Resources Information Project will provide leadership in the integration of material in electronic form into our traditional operations with books and other hard copy materials. This effort is a necessary initial step and a key part of the comprehensive plan for integrating all digital collections.

- Global Legal Information Network (GLIN) - GLIN is a cooperative international network in which nations are contributing electronically the full, authentic text of statutes and regulations to a database hosted by the Law Library of Congress. GLIN is the digital future of the Law Library and an increase of $396,000 is requested to support GLIN's expanding from 12 to approximately 30 countries by the year 2004 - an addition of three to four countries per year. The Library plans to use receipts provided by participants and sponsors of GLIN to help support GLIN development, but these receipts will not be sufficient to ensure success until a critical mass of countries is achieved.

- Copyright Office Electronic Registration, Recordation and Deposit System (CORDS) - CORDS is the electronic future of the Copyright Office and provides the public with an electronic means to submit copyright claims and documents which streamline internal processing. Development, as well as testing, will continue through successive phases with an increasing number of electronic registrations over the Internet. In the year 2004, the Library expects to receive at least 100,000 works (out of a total of more than 700,000 works) in digital form -- such as census data, films, music, encyclopedias, scientific papers, and legal documents. An increase of $143,988 (funded by receipts) is requested to expand the CORDS system into new formats, provide on-line customer support, support increasing digital storage needs, and enhance technical capabilities.

- Automation Infrastructure Support - An increase of $3,250,000 is requested to fund automation infrastructure support item: (1) $1.9 million to upgrade the Library's digital voice switch, which has been in operation for more than a decade and will not be able to support the Library's growing telecommunications requirements in the 21st century- (2) $600,000 to increase computer server storage and capacity, which is necessary to meet the growing demand of the millions of transactions processed daily; (3) $500,000 to fund additional security and disaster recovery measures, which are becoming increasingly critical with the growth of online systems; and (4) $250,000 to support the first phase of a central financial management system replacement project. The Library is undertaking an institution-wide planning effort to coordinate these building blocks and other digital initiatives in order to provide the most effective information services for the 21st century. The Library is also seeking advice and counsel from the National Academy of Sciences as part of our planning process. Reengineering traditional functions and adding digital content are critical elements of the planning (see attachment #2). The overall transition to modern electronic services Library-wide will be a multi-phase, multi-year process (see attachment #3). (Attachment available on hard copy only).

Fiscal year 2000 marks the end of the initial five-year National Digital Library (NDL) program, and the Library will present, in next years budget, its plans for the future of our digital programs. The highly successful NDL program serves as a catalyst for institutional change, in addition to making possible access by millions of Americans to the Library's vast holdings. A recent PC Magazine review of the Top 100 Websites stated: "We've raved about The Library of Congress for years, and it just keeps getting better." We plan to build on our successful five-year NDL program to ensure public availability of additional high-quality content.

With regard to the Library's Year 2000 (Y2K) readiness for automated operations, the Library has identified 99 mission critical systems and is on-schedule for making these systems Y2K compliant by September 30, 1999 (see attachment #4). The General Accounting Office conducts regular reviews of our progress in reaching Y2K compliant automated operations and reports quarterly to the Congress on our progress. (Attachment is available on hard copy only).

-Succession Program-

The Library's ability to serve Congress and the nation depends in large part on its expert staff, particularly those who have intimate familiarity with the special collections or fluency in foreign languages. In 1996, Library Services undertook an analysis of its vulnerability to retirements and determined that by fiscal year 2004 50 percent (1077) of its staff would be eligible for retirement. An additional concern is the need to provide upward mobility opportunities for motivated technicians who have demonstrated their ability to move into professional positions. To respond simultaneously to both of these needs, the Library requests $568,134 to initiate a cost-effective Library Services Career Enhancement and Succession Plan that will give existing staff opportunities to advance to critical professional positions while also enabling the Library to recruit a new corps of junior technicians. Without the additional funding for technician positions, our newly promoted (and higher paid) curators will be forced to devote time to technician-level assignments, which would not be a cost-effective use of resources.

The Congressional Research Service faces a similar challenge. One-half of CRS' staff of analysts, attorneys and reference librarians will be eligible to retire by the year 2006. To address this challenge, CRS began a research capacity risk assessment process in 1996 and identified the specific subject areas where staff were likely to retire in the next few years. CRS foresees reduced analytic capacity in a significant number of subject areas as early as the year 2000- these losses will accelerate and affect almost every area of legislative support to the Congress by 2004. Rebuilding this capacity requires a multi-year learning period during which new staff develop the breadth and depth of knowledge of the specific issues as well as of the legislative process. To meet these challenges, CRS has developed a multi-year plan to begin hiring replacement staff. In fiscal 1999, the Congress provided $435,858 to begin this hiring process, using the Graduate Recruit Program and the Law Recruit Program. The fiscal 2000 request seeks $559,052 to continue to hire staff to ensure the continuity of services to the Congress, while remaining within the full-time equivalent level provided in the fiscal 1999 budget.

-Security of Library Staff, Collections and Facilities-

During 1998, the Library's House and Senate oversight committees approved our comprehensive Security Plan, and the Congress approved supplemental appropriations totaling $16,975,000 for the Library's physical security. These two Congressional actions provide a framework for the security of the Library's collections, facilities, staff, visitors and other assets. As a result, additional security measures will be put in place during fiscal years 1999 and 2000: the recruitment of additional police, the installation of entry screening equipment at all public entrances, the design and installation of additional perimeter security enhancements, and the design and development of an improved intrusion detection system. The Library is working with the Capitol Police and the Architect of the Capitol to complete a memorandum of understanding, which will ensure proper coordination of all security efforts.

The supplemental appropriations in fiscal 1999 did not provide additional funds for collections physical security initiatives. Thus, for the fiscal year 2000 budget, the Library is requesting an increase of $1,352,201 to support three key collections security enhancements.

- Reader Registration - The Library's Security Plan specifies, as a minimum standard, the identification of all patrons requesting material from the collections. The Library is requesting an increase of $466,791 to implement this minimum standard in all reading rooms.

- Marking and Tagging Library Materials - The Library's Security Plan specifies, as a minimum standard, the marking and tagging of most material. The Congress approved and funded the marking and tagging of materials received via copyright deposit starting in fiscal 1999, and the Library requests $476,378 to expand marking and tagging to other sources of acquisitions (i.e., gifts, exchanges, purchases) - Contract Security Monitors - The Library is requesting an increase of $370,188 to improve the enforcement of security standards by placing security monitors in

five additional reading rooms where unique materials often of great value are used - Law, Geography and Map, Music, Prints and Photographs, and Rare Book and Special Collections. Contract security monitors are now used in the Manuscript and Main reading rooms to ensure that each patron is registered, enforce personal belongings restrictions, monitor the activities of visitors, and examine materials being removed. The Library asks that this successful program be expanded to these five additional important reading rooms.

-Law Library-

The Law Library of Congress maintains the largest collection of legal materials in the world and also houses a unique body of foreign-trained lawyers to supply legal research and analysis, primarily for the Congress, on the laws of other nations, international law, and comparative law. More than 200 jurisdictions are covered by Law Library specialists, some 80 percent of the sovereign entities of the world that issue laws and regulations. The Law Library utilizes this talent to maintain and develop the breadth and depth of a demanding collection, as well as to provide reference services whenever either chamber is in session (as mandated by the Congress). These are daunting responsibilities. The U.S. Courts, the executive branch, and the legal community also depend heavily on the Law Library's collections.

The Law Library has been creative in attempting to meet its responsibilities, particularly with the development of its Global Legal Information Network, but funding for 8.5 FTEs ($548,852) is crucially required. The funding would ensure adequate staffing for research and reference services, improve the security of the rare book room collections, and improve book retrieval services. The Law Library is also requesting $188,250 for contractual services to maintain the filing of looseleaf inserts. The integrity and currency of legal publications -- which contain laws, administrative rules and regulations, and legal interpretations -- must be maintained to be of continuing value to the Congress.

-Copyright Office-

The Library's Copyright Office promotes creativity and effective copyright protection -- annually processing more than 650,000 claims (representing more than 850,000 copies of works transferred to the Library) of which 550,000 claims are registered for copyright. The Copyright Office also responds annually to more than 395,000 requests for information.

On July 1, 1999, the Copyright Office plans to increase its filing fees and other statutory fee services. The new schedule of proposed fees was presented to the Congress for consideration at the beginning of February. The basic filing fee for registering a claim will increase from $20 to $30, and other statutory fees, such as those for filing renewals or recording a document, will also increase. These increases, coupled with the fee changes for special services which went into effect July 1, 1998, represent increases in some cases of as much as 225 percent. We expect fee increases to boost the Office's receipts by $4.8 million in fiscal year 2000. The new fee structure should provide 70 percent cost recovery for registration, recordation and related services. The Register's statement provides a more detailed explanation of the proposed increase.

The ability of the Copyright Office to serve the nation effectively requires restructuring and streamlining operations. The Library requests approval to use part of the additional receipts ($694,212) to redesign the workflow and to bolster its core staff of examiners, which will ensure the timely processing of claims for registration. To improve public service, efficiency, security, cash management, and contain costs, the Copyright Office must redesign its workflow and hire additional examiners.

The Library also requests authority to use part of the additional receipts to fund further growth of the CORDS effort ($143,988, see automation building blocks) and to fund newly imposed storage costs ($268,204) levied by the National Archives and Records Administration.

-National Library Service for the Blind and Physically Handicapped-

The Library administers a 67-year-old cooperative effort with state and local agencies and the United States Postal Service to provide free braille and recorded materials for blind and physically handicapped persons. The Library selects and produces full-length books and magazines in braille and on recorded disc and cassette and provides special playback equipment. We distribute reading materials and playback machines to a network of cooperating regional and subregional (local) libraries, who circulate those materials to eligible borrowers and returned to libraries by postage-free mail.

The fiscal year 2000 budget maintains program services by funding mandatory pay and price level increases totaling $1,209,000. The budget also supports the exploration of alternative digital technological possibilities that would provide a less costly, more efficient, internationally acceptable, user-friendly delivery system.

-Library Buildings and Grounds-

The Architect of the Capitol (AOC) is responsible for the structural and mechanical care and maintenance of the Library's buildings and grounds. In coordination with the Library, the AOC has requested a capital budget of $9,405,000, an increase of $6,238,000. The AOC capital budget includes funding for six projects totaling $6,350,000 in appropriations, that were requested by the Library. Library requested projects, as well as AOC identified projects, are prioritized based on critical need and in accordance with both the Library's Strategic and Security Plans. The six projects support four important areas: (1) the security of our collections by providing additional electronic card readers, alarm devices, and other protections ($1,400,000); (2) the preservation of the Library's collections as a result of improved environmental conditions for exhibit space ($450,000), (3) the support for and oversight of initial construction efforts at the National Audio-visual Conservation Center ($500,000); and (4) the acquisition of additional storage space by funding a second collections storage module at Fort Meade, Maryland ($4,000,000). Properly storing the Library's collections in secure, safe, and environmentally sound facilities is the most important step toward preserving our collections for future generations.

I urge the Committee to support the Architect's Library Buildings and Grounds budget and his position that reinvestment in the existing infrastructure is necessary and a prudent measure for the long-term support of legislative branch operations.

-Audio-visual Conservation Center-

The Library's House and Senate oversight committees have approved a Master Plan option for the renovation of the National Audio-visual Conservation Center in Culpeper, Virginia, which provides for the donor to retain ownership of the center through Phase 1 (2001). As a result, the Library requests an increase of $290,000 to fund fiscal 2000 operating costs, which are estimated to be $509,000. When ownership of the Center is transferred to the AOC, these operating costs will be reallocated between the AOC and the Library, in accordance with normal Library Buildings and Grounds budget practices. In August 1998, the Library began to store film at the center.

-National Film Preservation Foundation-

The Library is requesting an increase of $250,000 to fund the government's matching grant in accordance with section 209 of Public Law 104-285. To date, the National Film Preservation Foundation has received pledges totaling $1.2 million ($500,000 in actual receipts) from private persons and State and local governments.

The $250,000 increase would fund the government's matching share and support the preservation of our film heritage.

-James Madison Building Workstation Modernization Project-

The Library is requesting an increase of $1,528,000 to begin a five-year accelerated workstation modernization project in the James Madison building. We have replaced employee workstations in the Thomas Jefferson and John Adams buildings with modern furniture and equipment as a result of the renovation project. Furniture and equipment installed 20 years ago in the James Madison building, during an era of typewriters and long before the introduction of personal computers, must now be replaced to provide for ergonomically correct workstations in all three of the Library's Capitol Hill buildings. Poor workstation design contributes to the risk of injuries and lower staff productivity. An increase is required to complete the project within five years instead of the 16 plus years the current level of resources would require.

-Proposed Legislation-

During the 105th Congress, the Library's oversight and appropriations committees agreed upon authorizing legislation for the American Folklife Center (AFC) and the National Audio-visual Conservation Center. The Library is moving expeditiously to secure all appointments to the AFC board and to realize the master plan for the Culpeper site approved last December. During the last Congress, we also secured legislation for a commemorative coin to be issued in April 2000 in observance of the Library's Bicentennial. In discussing the Library's plans for its Bicentennial with our oversight committees, we stressed the continuing need for the Library to have improved statutory authority for its revolving and reimbursable funds. The 105th Congress approved a revolving fund to improve the accountability and statutory basis for the Cooperative Acquisitions Program. We will be seeking similar authority during this Congress to address the business operating needs of the Federal Research Division and FEDLINK, each of which serves a wide constituency within the Federal government. The bill is our top legislative priority for the 106th Congress. Passage of such legislation would address a critical element of our five-year legislative plan to improve and stabilize the Library's business operations.

-Office of Inspector General-

The Library requests an increase of $139,343 to fund two professional auditors in the Office of the Inspector General. The two auditors would concentrate on reviews of the Library's physical security and automated systems, both areas of critical importance to our operations.

-The Library's Bicentennial-

The Library will use its Bicentennial in the year 2000 less to celebrate our past than to leave a legacy for the future. We have crafted -- almost entirely with privately raised funds -- a multi-faceted Bicentennial Program "to inspire creativity in the years ahead by stimulating greater use of the Library of Congress and libraries everywhere." Bicentennial projects include: reconstituting Thomas Jefferson's original library through private donations; a "Favorite Poem" project spearheaded by the Library's Poet Laureate- a national photography contest, "Beyond Words: Celebrating America's Libraries," jointly conducted with the American Library Association; and a "Local Legacies" project to document unique local traditions from congressional districts throughout the nation for possible inclusion in the American Folklife Center's collections.

The kick-off event later this year for the Bicentennial will be a symposium on the Frontiers of the Mind in the 21st Century, which will bring together at the Library leading thinkers in various disciplines to talk about the way their field will change in the 21st century. The concept of "Gifts to the Nation" is central to the Bicentennial effort. The Library itself is a Congressional "Gift to the Nation." Sharing the Library's collections and information about the Congress with Americans in their local communities through an expanded National Digital Library is the Library's major gift to the nation.

-Summary-

The Library's budget request for fiscal year 2000 -- a net increase of 5.5 percent over fiscal 1999 or $20 million -- supports the building blocks for realizing our strategic priorities. Most of this increase ($16.6 million) is needed to fund mandatory pay raises (driven largely by the January 2000 pay raise of 4.4 percent) and unavoidable price-level increases.

By funding the Library's fiscal year 2000 budget request, the Congress would support the major transition of staff and operations that must take place to permit the Library to head into the 21 st century with the foundation in place to provide the maximum service to the Congress and to its constituents.

For fiscal year 2000, we submit a budget request that will enable the Library of Congress to continue to make major contributions to the work of the Congress and to the creative life of the American people.

Return to Headlines

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IP Multicast supports the mass delivery of MP3 files, a videoconference, or a multimedia presentation as a single copy that travels alone over the network. Only a handful of Internet service providers presently subscribe to the MBone -- IP Multicast Backbone on the Internet -- that supports IP multicasting over the Net.

"It's only the ISPs with the biggest geeks," said Pepper.

The next version of Winamp, expected this week, will include some multicasting features, but Pepper said that the functionality will remain unused without multicast support in the routers.

In its current state, RealNetworks' Barrett said the Internet is simply not set up to deliver steady streams of high bit-rate audio, and that Nullsoft faces a big challenge in scaling up its system.

Further, since MP3 was never designed as a streaming technology, it is more challenging to transmit over the Internet without packet loss and the accompanying sound gaps and distortion.

"I know where these MP3 guys are coming from with multicasting," he said. "We thought that was the solution three years ago, but then went through the learning curve and came up with our solutions."

Another major roadblock to streaming MP3 music over the Net is the long-arm of the Recording Industry Association of America. The RIAA has pursued legal action against companies and individuals creating and working with MP3. Whore discovered this when he tried to set up a legitimate Net-based radio operation.

"For a small person doing this, it is nearly impossible [to get legal rights] since seven or eight different organizations want money," said Whore.

He said groups that represent music publishers, like the Harry Fox Agency, demand anywhere from US$100 to several thousand dollars per year to play their copyrighted songs over the radio.

"Basically, they said, if you're a small company, we'll see you in court."

The situation could change later this year when the US Department of Commerce establishes licensing rates for Net broadcasters under last year's Digital Millennium Copyright Act. By creating a licensing structure for Net-based broadcasts, the law is expected to separate major, commercial players from small-time operators.

"We are in active discussions with the RIAA and they have been very supportive of Shoutcast's ability," said Robert Lord, director of online strategies at Nullsoft. "They see this as a positive thing, and we intend to work with them to simplify the licensing process.... By us working with the RIAA we can help micro-webcasters flourish."

In the meantime, the number of MP3 users will continue to grow like weeds throughout the Net, playing whatever they want, whenever the moods strikes them.

"At this moment, I'm just hanging out there with the pirate flag on," said Whore.

Related Wired Links:

The Dead Grateful for MP3
8 Feb 99

Big Buys Challenge MP3
8 Feb 99

DreamWorks Records Tries MP3
5 Feb 99

Rykodisc Endorses MP3
4 Feb 99

MP3 in Your "Car." Far Out.
4 Feb 99

You Make Me Want to Shoutcast
12 Jan 99

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RELEASE 1.0

1-99 ESTHER DYSON'S MONTHLY REPORT 15 JANUARY 1999

SEARCH AND SEARCHABILITY

By Kevin Werbach

'Twas the best of searching times, 'twas the worst of searching times....

The Internet has collected massive quantities of information and opened it up to the general public. Thousands of concurrent users can perform full-text searches across libraries of more than 100 million documents... all in a matter of seconds. Sites built around search engines are among the most popular destinations on the Web.

Yet how many of those millions of page views are the "wrong" documents users must sift through to find what they were really looking for? Internet search engines often produce long lists of pages wholly unrelated to the desired topic. Even then, they index only a minority of the Web. Entire businesses do nothing but manipulate search services to rank their clients' sites higher. Search engines today are clearly more powerful than in the past, but are they really more useful?

Better search engines will require more than bigger indexes and faster processing of Boolean queries. Search is fundamentally linked to meaning, that deepest and most slippery of concepts. To uncover meaning, search engines must go beyond document text to glean knowledge about structure and context. In this issue of Release 1.0, we explore recent developments and consider the future of search technology.

Search engines narrow vast rivers of information into usable channels. There is no greater information resource than the Web, and it is through the Web that search services have achieved mainstream recognition.

A search engine maps between two items: a query and a response. The query is typically a few keywords and the response is usually a list of documents, but both are proxies for fuzzier concepts. Keywords and documents are the denotation, but what users really want resides in penumbras of connotation. When I ask for information about world leaders and cigars, I may be thinking about Fidel Castro or Bill Clinton. A query about Gates and Windows may ====>

THE FORUM IS FILLING UP FAST!!!

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concern Microsoft or home remodeling. The documents in the response list are also surrounded by clouds of associations: An editorial advocating marijuana legalization carries different implications depending on whether it runs in the *New York Times* or *High Times*.

Keyword matching elides these distinctions. Keywords are woefully inadequate approximations of the semantic structures of the mind, but they are the only explicit information traditional search engines have to work with. The new companies we discuss below offer a variety of solutions, including placement auctions (GoTo.com), popularity tracking (Direct Hit), link structure analysis (Google and IBM's CLEVER project), natural language processing (Ask Jeeves) and lexical object creation (Lexeme).

Portal combat

If portals are the desktops of the Web, search services are the file systems. For many users, search services take the place of structure beyond a few regularly visited sites. Consequently, the evolution of search technology will influence the development of the Web on both technological and economic levels (but see page 14 for Esther Dyson's analysis of why search services will become less relevant over time).

Portals are always looking for ways to distinguish themselves from competitors and gain a greater share of advertising or other revenue. In the past two years, the major services have built out content beyond their core search franchises, spending money and time adding community features, e-mail, e-commerce, e-t cetera. The portals have had to work hard enough just to scale the capacity of their search engines to meet demand. Consequently, there have been few significant improvements in search quality.

The pendulum is gradually swinging the other way. Danny Sullivan, editor of Search Engine Watch, points out that AltaVista has added features such as spell-checking, language translation and a query refinement tool. Infoseek has incorporated new technology to improve result relevance, although its index remains relatively small. With every portal offering a similar suite of destination features, search once again becomes a point of differentiation. Users may stay on portals for the added features, but they still come in the door primarily for searching. If competing sites can offer better search results, users may switch and find other places to get their free e-mail or stock quotes.

I STILL HAVEN'T FOUND WHAT I'M LOOKING FOR

Why is it so hard to find anything on the Internet?

First off, the Web is big. Lee Giles and Steve Lawrence of NEC Research estimated early in 1998 that there were at least 320 million searchable Web pages, and the number has probably doubled since then. That doesn't include documents behind firewalls, dynamically generated or otherwise inaccessible to search engines, which may still contain information users are looking for. Today the most comprehensive search service indexes roughly 140 million pages, a fraction of the total.

Quantity isn't the only problem. The Web changes constantly, with thousands of pages being added and disappearing every day. Even if you could fit the Web on a disk array, you would simply have a snapshot at a particular point in time (something not without value, and the aim of Brewster Kahle's Internet Archive. See **Release 1.0**, 5-98) In fact, it's worse than that. The only way to pull together a large quantity of Web pages is to use robots or spiders to crawl in search of new sites (see page 7). By the time you're done taking your snapshot the Web will have moved, like those old-fashioned photos where people have walked through the background as the plate was being exposed. Some of the information is already out of date the moment it becomes searchable.

The demand on search engines is increasing as well. The World Wide Web Worm, one of the first search services, handled 1,500 queries per day in April 1994; AltaVista now handles over 40 million queries per day. In addition, the community of searchers is broadening with the Internet itself. Users may look for information in many different languages, for example.

No structure no find

The Net operates on a least-common-denominator basis. Web browsers are effective "thin clients" because they do not require data to be formatted in a specific manner. Client-server systems rely on a tight coupling between the two ends of the connection; data on the server side is formatted in a specific manner that the client understands. With IP and HTML, the Web browser need only understand a simple set of markup commands. As a result, content creators don't have to worry about the specific characteristics of every client system. The tradeoff is that the browser generally sees information on the server as an undifferentiated mass of text, graphics and other objects. Only a simple set of formatting tags suggest internal structure, with no consistency from site to site.

Commercial database providers such as Lexis-Nexis and Dow Jones spend significant time and effort organizing content that goes into their systems so that it can be retrieved more easily. Even if tools for such markup were available, many Websites wouldn't use them. The Internet Engineering Task Force and World Wide Web Consortium (W3C) can promulgate standards, but beyond the basics needed for connectivity it's up to users whether to follow them. (A good example is HTML 3.0, which added many new features but was never fully implemented by browser vendors. In HTML 3.2, W3C eliminated most of the proposed additions and simply tried to codify existing practice.)

Efforts are underway to give Web content -- and by extension the Web itself -- greater structure. The extensible markup language (XML) transcends the limited scope of HTML and allows information to be organized under any schema embodied in a document type definition (see **Release 1.0**, 5-98 and 9-98). The W3C's Resource Definition Format (RDF) standard provides an XML-based structure for categorizing and rating Web content (See **Release 1.0**, 5-98).

XML and RDF will be important for specialized communities and for content aggregators. For example, a site could provide links and search capability limited to kid-safe pages, or to documents accessible to the sight-impaired (or, we must acknowledge, to content that a government has ap-

proved). Chemical engineers could tag their research papers so that colleagues could search using categories familiar to that discipline. Italian speakers could locate only materials available in their native language. XML can also open up the proprietary data structures of commercial databases to browser-based access, assuming the business models can be worked out.

XML is not a panacea. Someone still has to tag all that content, and many sites simply won't go to the trouble. And structure alone is not sufficient, because people search for different things. Without agreement on terms and categories, people will still retrieve results that fail to correspond to their interests.

Dealing with information overload

Editors have been the traditional way of dealing with information overload. Good human editors guide users through the thicket of information to find nuggets of knowledge, and also create them by ordering the world and the information in it. That's how newspapers and magazines work: They channel a vast array of data into a usable package.

The Web also has edited directories of information, Yahoo! being the most prominent. But Yahoo! captures only a tiny fraction of the Net, and Yahoo!'s categories may not match up with your own. The Mining Co. (see **Release 1.0**, 7/8-98) offers more detailed information, using editors not only to categorize information but also to put it in context and recommend the best sites for certain subjects. Yet this results in even narrower coverage: The Mining Co. has about 600 topic headings compared to roughly 20,000 on Yahoo! Northern Light attempts a hybrid approach, dividing search results on the fly into topic categories, but that doesn't necessarily get users to the documents they are looking for.

The problem is that human editors can't keep up with the Web. People (and their salaries) simply aren't sufficiently scalable to organize the entire Web through any explicit process. (As we describe below, however, implicit preferences can be harnessed to improve search. See pages 11-20.) There is also an inevitable tradeoff between depth and breadth. Companies such as Content Advisor (see **Release 1.0**, 5-98) can categorize pages to filter material deemed inappropriate for children or the workplace, but the subject categories are too broad to be of much use for searching.

Information overload has secondary consequences. One is that search services, limited as they are, have become increasingly important and valuable resources. In the proprietary database world, value lies in the information itself, or perhaps in the consistent manner that information has been tagged for retrieval. On the Web, information is free, but the value is in the information-gathering and search technology necessary to sift through that mass of data. Search services (or their VCs) have recognized the value of this asset and have marketed themselves into portal sites with dizzying market capitalization.

A further consequence is that placement in search results on major portals becomes a valuable commodity for online businesses. People may never find out about your site if it doesn't show up when they query a search engine. One way to gain visibility on a search site is to buy an advertising ban-

ner linked to a keyword. That costs money, though, and doesn't place the site directly within the search results listing. Consequently, many people try to trick the search services into ranking their pages highly in response to common queries (see page 6).

In addition to the breadth/depth dilemma, there are other tradeoffs any search site must contend with. Even if you can design an effective algorithm to categorize pages, it has to run quickly enough the answer large numbers of queries. AltaVista, for example, reports that at peak times its service processes over 1,500 queries per second.

THE ECONOMICS OF SEARCH

Search services are driven by more than technical considerations; they must also consider business realities. Because search is now big business, companies take financial considerations into account when designing their services.

Specifically, commercial Web search sites don't necessarily want to take you directly to the site you're looking for. Unlike proprietary databases, the search service has no control over the underlying content. Instead of charging for the content, it must extract value from the search process itself. One way to do so would be to charge a subscription or usage fee for searching the Web, but that seems unrealistic given the tradition of free Web-based services and the number of free competing search sites. (For analysis of the economics of online content, see **Release 1.0**, 12-94, 1-96.) The primary alternative is to charge for advertising, which is how all the current search services make the bulk of their money.

For an advertising-driven site, the more pages a user views the better. If the search engine takes you immediately to your desired site, you won't stay long. But if you have to click through several pages and perhaps enter multiple queries, you'll generate more revenue for the search service even as you have a less-satisfying experience. The search services compete with one another, so they need to offer good enough results to keep users around, but that's all.

As search-oriented sites have become portals, moreover, they have gained other goals beyond slow but accurate search results. Where originally search services merely returned a list of links with a banner ad, now they provide a range of other options dynamically generated from the search query. For example, the search service might offer a link (advertiser-supported) to books available through Barnesandnoble.com on the requested topic, or a football-related query might return a link to the portal's own ad-filled football section in addition to the external sites in the search results. This is in addition to the topic-specific ad banner, which the portal can sell at a higher cost per thousand (CPM) because it is more likely to be relevant to the user. As the portals become more and more inclusive, their incentives shift ever further away from offering good search results.

The recent launch of Disney's Go.com shows this trend to its full extent. Unlike most portals, which grew out of narrower services, Go emerged fully formed from the head of Michael Eisner. Go provides a consistent inter-

face of links to Disney-owned content such as ESPN sports information, ABC news and Disney children's content, along with a Web-wide search service powered by Infoseek. According to Barak Berkowitz, senior vp of Infoseek and general manager of the Go network, this offers a better experience for users because navigation commands and content are always in consistent locations. However, the more portals become their own self-contained worlds, the less the Web differs from the closed models of traditional media such as magazines.

Because placement in search results is so valuable, the search services also have an incentive to sell their listings to the highest bidder. To users, search engines are black boxes, so it can be almost impossible to tell if a site received a favorable ranking because it paid for it. In 1996, Open Text launched a search service that sold preferred placement in search results. The Open Text Index generated significant controversy because many people felt selling placement compromised editorial integrity. The site has since been folded into a business-oriented product without the preferred placement option. The idea of selling premium placement in search results has since been resurrected by GoTo.com (see page 7).

Search engine persuasion

An entire sub-industry has emerged to improve sites' placement in search results. Companies promise (often in spammed promotional e-mails) that they can deliver higher rankings, greater traffic and greater revenues. Some techniques are benign, such as making sure the site has been submitted for inclusion in all the major services and that page titles provide good information about their content. In other cases, though, people deliberately try to fool the search services. Massimo Marchiori, a researcher at the World Wide Web Consortium (W3C), calls such manipulations search engine persuasion (SEP). Search engines give each page a score in response to a particular query and then return results in ranked order. Sprinkling repetitive invisible keywords on a page is the simplest way to enhance those scores. Sites that want more traffic can fill their pages with common keywords even if they do not correspond in any way to the subject area of the page. This is particularly common for pornography sites.

Search services try to prevent sites from artificially obtaining high rankings. If the quality of search results degrades too far as a result of such manipulations, people will be less likely to use search services. More to the point, search services don't get any revenue when sites artificially boost their rankings; they would prefer that companies pay them for banner ads tied to keywords instead. A final, less obvious negative consequence is what Marchiori calls flattening. If several sites all receive the highest possible score, the search engine has no good way to order them. Thus, when many sites use artificial techniques to improve their ranking, the rankings themselves become less useful.

The major search services keep their exact ranking algorithms secret, and also tweak the algorithms frequently to foil manipulators. The manipulators, of course, keep trying to reverse engineer the search algorithms by analyzing sites that score highly in response to common queries. It's a never-ending arms race, much like the battles over computer viruses.

As long as search result placement is a valuable commodity (that is to say, as long as search services are widely used), people will do anything they can to fool the search services. Fortunately, the new search technologies we describe below have the side benefit of making it harder to do so. One reason it's relatively easy to fool search services is that they rely almost exclusively on the page text, which the owner can control. Other methods, such as popularity tracking (see Direct Hit, page 13) or link structure analysis (see Google and CLEVER, pages 16, 17) determine relevance from the activities of others. It's possible to create artificial links and traffic, but this is more difficult and less effective than manipulating the page itself.

How a search engine works

Because the Web doesn't exist in any finite location, a search engine must do more than simply scan through a defined corpus. Web search engines perform three primary functions: acquiring information about pages, organizing it and responding to queries.

The first step for any search engine is to create an index. There is no central map of the Web, so search engines must find all the pages to search themselves. They do so by operating distributed networks of crawlers or spiders that follow links through the Web to identify new pages. When a crawler finds a new or updated page, the search engine processes the page to extract the useful information (such as the unique words on the page and their frequency). Most search engines don't actually store the full text of pages themselves (Google is an exception) because of the disk space and other overhead required.

This information collected by the crawlers is assembled into an index, optimized for rapid queries. When a user types in a request, the search engine extracts the most relevant documents from the index through a scoring algorithm. The completeness of the index, and the sophistication of the algorithm, are what distinguish one search service from another.

Directories such as Yahoo! are not search engines, because they rely on human ontologists to categorize information. Directories allow users to follow structured taxonomies to locate information on a particular topic. As IBM's CLEVER project demonstrates, however, the demarcation between search services and directories is not as sharp as it may seem (see page 18). As search engines improve, they will obviate some of the need for human-assembled directories, but the directories can add more detailed descriptions in response.

GoTo.com: If you can't beat 'em, join 'em

An alternative solution to search engine persuasion is to put listings up for sale. After all, the yellow pages gives priority (through boldfacing, color or display ads) to companies willing to pay for more prominent listings. No one seems to mind that when you turn to a given category, the first thing you see is the company that paid the most. In fact, the size of the ad itself provides some relevance feedback. Larger compa-

nies can afford more prominent ads, but they may not need them if they have strong brands that customers will look for directly. Smaller companies will pay for bigger ads if they strongly want your business... or if they have backers who believe in them and will fund such marketing.

GoTo.com, based in Pasadena, CA, wants to bring this yellow-pages model to the Web. Founded in late 1997 by Bill Gross' idealab!, with additional funding from Draper Fisher Jurvetson, GoTo.com offers traditional search results generated by Inktomi and supplemented with category-specific rankings assembled by human editors. What makes the site unique, however, is that it auctions top listings to the highest bidder. The amount an advertiser pays is disclosed right on the search results page, and GoTo charges the advertiser only when a user clicks through to a site. Ceo Jeffrey Brewer joined from CitySearch in February 1998, and the site launched in June. The company now has over 70 employees.

Brewer asserts that GoTo's approach benefits both consumers and advertisers. Advertisers can target searchers directly, rather than rely on banners, and can calibrate their spending by bidding only what they are willing to pay. Over 5,000 have signed up so far. Consumers see which advertisers will pay the most for their business. In a user survey conducted in October by the NPD Group, GoTo ranked second behind Ask Jeeves (see page 21) in overall effectiveness and tied for first in search success.

GoTo is a free market, and markets are complex systems that evolve in unpredictable ways (just ask Long-Term Capital Management!). On the other hand, this is a market with fairly detailed rules. For example, GoTo limits advertisers to search terms that actually relate to their site, to prevent companies from tricking users into visiting. An advertiser recently accused GoTo of favoring another idealab! company, but Brewer convincingly denies that anyone receives preferential treatment. He acknowledges that GoTo has to make the market as transparent and efficient as possible, so that advertisers understand exactly where they stand vis-a-vis competitors.

Biological evolution not only produces the survival of the fittest, but also generates increasing diversity and new species. If GoTo were to follow a similar pattern, advertisers over time would purchase more-specific category listings, targeting their marketing to narrower consumer interests. Users would then get smaller numbers of results that more closely matched their interests. Since GoTo launched, the percentage of clicks on revenue-generating listings has increased from 1 percent to 10 percent, and the average price per click has increased from 1 cent to 10 cents.

GoTo's model is most effective when many advertisers compete. On average, 20 percent of users click on the first site listed, 9 percent on the second and five percent on the third, meaning that top placement makes a real difference. Bids have reached as high as $2.80 per click in the Web hosting category, with more than 80 competing advertisers. Paid listings are not limited to e-commerce categories. A search on "cancer," for example, brought back sponsored links to a drug company, community sites, information publishers and a topic guide from The Mining Co. (see page 4).

In addition to its own site, GoTo partners with other sites that want to add search functionality. Brewer notes that because GoTo only does

search, it does not compete with community-oriented sites that are potential partners. Because GoTo gets paid for search listings, it can give its partners all the banner advertising revenues and still make money.

So far, GoTo has avoided the controversy that sank the Open Text Index. Perhaps the explanation is that the Web has gotten far more commercial since 1996, and people have become accustomed to the notion of search services as advertising vehicles. GoTo has gone out of its way to be open about its methodology and why it believes this system benefits users as well as advertisers. With proliferation of Web content and the rise of search engine persuasion, customers may be more willing to accept an alternative approach.

What doesn't get indexed

The economics of search depend on more than search engines themselves. The search services don't index a great deal of the content accessible through the Web. Some of the content (such as dynamically generated pages or non-HTML files) is hard to index directly, and in many cases sites specifically direct search engine crawlers not to index them. The de facto robot exclusion standard provides a mechanism for sites to declare themselves off limits to search engines. Most news-oriented sites do so.

The problem is that these sites can't capture the full benefits from search-service traffic. Ad-supported news sites want users to come in through their main home page, rather than zip directly to a specific story. The problem is even more acute for proprietary databases that make revenue from subscription fees. Because there is no universal system for micropayments and copyright protection on the Web, such sites don't want users to click to their precious content. If and when payment and protection technology becomes commonplace, these providers will want to release their links to the search services.

BUILDING A BETTER MOUSE TRAP

Computer search technology has evolved over a period of decades. Most pre-Internet work in information retrieval involved central databases that could be structured and searched directly. Companies such as Lexis-Nexis developed proprietary, vertically integrated systems down to the terminals, and sold them to professionals in fields such as law and finance that could justify the relatively high expense.

As search technology, processing power and computer networking advanced, it became possible to search many different content databases, and to query the full text of documents rather than just the headers. The problem, in the age of client-server, was that every database had its own query language and client software (for a detailed discussion of this problem and some responses, see **Release 1.0**, 4-91). The Web solved many of those problems with its universal browser client, but at the expense of the sophisticated index management and query structures the proprietary systems offered.

Most Internet search services began as university or corporate research projects. Lycos was a project of Carnegie Mellon university. AltaVista

was designed to show off the performance of Digital's Alpha processor chip that powered the service. Inktomi grew out of distributed computing technology developed by Berkeley computer science professors. Excite was developed by Stanford students. Venture capitalists quickly saw the potential of search and navigation sites as commercial ventures, however, especially after Yahoo!'s IPO. As the search services shifted from technology projects to the corporate world, they began to focus less on the technology of searching itself.

Inktomi: e pluribus unum

Inktomi was the first technology provider to target Internet search services. Its technology, developed by Eric Brewer at the University of California at Berkeley, allows tasks to be efficiently broken up among many computers. A room full of workstations can therefore provide better performance than a more expensive supercomputer at a computationally intensive task like crawling the Web and answering search queries. Inktomi doesn't offer search services to end users; it is a technology wholesaler to companies such as HotBot and Yahoo! Inktomi has moved into other segments that can benefit from its approach, including caching (see Release 1.0, 6-98) and comparison shopping engines.

There are interesting parallels between Inktomi's role and another pioneering technology company, Thinking Machines. Several years ago, we described how Dow Jones had purchased a $2.5-million Thinking Machines massively parallel supercomputer to power its full-text search service (see Release 1.0, 1-88). Thinking Machines wasn't a search company; it was a technology company with a product that had many possible applications. Despite the sophistication of its technology, however, Thinking Machines eventually failed. Inktomi has so far succeeded in part because its distributed technology is not only better but cheaper than the alternatives. Moreover, the market for high-performance search (and the text available to search) is much greater today.

Meta-search engines

Try as they might, none of the existing search services covers more than a fraction of the Web. Because each search service crawls the Web independently, though, their databases do not completely overlap. Using more than one search service therefore provides greater coverage. Meta-search engines such as Metacrawler, Savvy Search and Dogpile automatically submit queries to several search services and aggregate the results with duplicates removed. NEC's Lee Giles and Steve Lawrence concluded that searching five engines at once returned roughly three times as many documents as a search on a single engine.

Some meta-search engines are accessible directly from the desktop, including the Sherlock search tool in Apple's new System 8.5 for the Macintosh. Sherlock integrates remote Web searching with search functions on the local computer. A tabbed interface allows users to find terms in local file names, the full text of local files (if the user has indexed his or her hard drive beforehand) or Web pages using a combination of several major search services.

Meta-search engines may provide better coverage, but they don't necessarily improve results. In fact, by increasing the number of sites that come back, they may even make it harder to find the desired information.

Giles and Lawrence have developed a meta-search engine at NEC that seeks to rectify these problems. Inquirus downloads and analyzes the full pages suggested by the initial search engines, rather than simply returning a combined list of URLs. Downloading the full pages provides two significant benefits. First, the system displays the search term in context instead of the title or first few lines of the page. Proprietary databases such as Lexis-Nexis have long offered "keyword in context" views. Studies have shown that this approach gives users a better sense of whether a page is relevant. Second, Inquirus re-ranks the pages based on the proximity of search terms within the document. Pages where the search terms are in the same sentence will likely be more relevant than pages where they are far apart, but without the full text of a page there's no way to do this kind of analysis for each query.

NEW APPROACHES: FINDING NEEDLES BY ANALYZING THE HAY

The problem with traditional search engines is insufficient information. Just analyzing the text on a page provides only a crude indication of what that page *means*. Search engines can use algorithms to estimate relevance based on frequency and proximity of search terms in documents, but those algorithms are inherently limited, especially in unstructured data. Even when search engines are able to match up pages with queries, the sheer size of the Web can make the information they return less than useful. Try typing "Microsoft and monopoly" into AltaVista and sifting through the 402,010 pages that come back. The same algorithms might have generated a manageable number of results when searching smaller proprietary databases, but on the Web additional ranking is essential.

Consistent and universal use of labels (XML-based or otherwise) would provide some additional information outside the documents themselves. However, as we described above (see pages 3-4), many content creators won't do so. Moreover, because of the propensity of sites to mislead search services (see page 6), any schema for categorizing Web pages wouldn't necessarily work even if widely adopted.

To be reliable, the supplemental information about Web pages must not be generated consciously by the page creator. This sounds counterintuitive, but a Web page author may not necessarily be the best one to describe it honestly. Reasonable minds may disagree about how a certain page should be categorized. It doesn't matter who's right; if the person doing the searching has a different term in mind he or she may never find the desired page. Many times searchers don't form their queries as precisely as they should, because they don't know the syntax of a given service or Boolean searching in general.

Data-mining technologies may help. Search engines have traditionally been considered a form of information retrieval, modeled on libraries. The focus has been on retrieving documents based on their content and classification. Data mining developed as a means to identify hidden associations

in relational databases. In other words, information retrieval looks at explicit information, while data mining extracts implicit information. Fortunately, these approaches are complementary. Companies are now exploiting data-mining techniques to derive additional implicit information from Web pages, in order to enhance the quality of search results.

What people search for

One of the challenges for search services is users. The more information the users puts into the query, the easier it is for the search engine to provide a good result. The basic Boolean interfaces of the major search services allow users to narrow the scope of a search significantly. The average query, however, is only 2.6 words long.

So what do people actually search for? Perhaps it should not be surprising that the most common thing people look for is dirty pictures. After all, sex sells. The following are currently the top 25 search terms used on the MetaCrawler meta-search service:

1. free
2. nude
3. sex
4. mp3
5. pictures
6. download
7. pics
8. new
9. music
10. de*
11. games
12. warez
13. university
14. women
15. girls
16. stories
17. software
18. chat
19. video
20. school
21. world
22. history
23. cheats
24. computer
25. art

* *Germans apparently use this query frequently to identify German-language content under the .de top-level domain. This term ranks so high because Germans are probably the largest population of non-English speakers on the Web today.*

Direct Hit: Popularity counts

The search process doesn't end when a computer returns a list of relevance-ranked pages. The user must still decide whether any of those pages answer the question. If most users who type in a query for "long underwear" select the ninth page in the list returned, there is reason to believe that that page is most relevant for that query. An engine that tracks user preferences in this manner won't tell you which page is most relevant for a new topic, but it can indicate that a much-selected page deserves a higher ranking than the initial Boolean algorithm suggests.

Direct Hit uses this popularity-based method to enhance search results. The company, located in Wellesley Hills, MA, was founded in April 1998 by Mike Cassidy and Gary Culliss. Culliss frequently searched online databases in his work as a patent lawyer. He realized the Net could automate the process of sharing effective strategies with fellow searchers, harnessing "the efforts and human judgements of the millions of people performing searches every day" to improve results. He hooked up with Cassidy, who had previously founded and sold computer-telephony software vendor Stylus Innovation, and developed a prototype. The Direct Hit technology won the grand prize at MIT's 1998 annual entrepreneurship competition in May. The company has closed two funding rounds from Draper Fisher Jurvetson and Mosaic Venture Partners totaling $3.4 million, and currently has nearly 30 employees.

At first glance Direct Hit's technology looks like collaborative filtering, but there are significant differences. Companies such as Firefly (now owned by Microsoft), LikeMinds (now owned by Andromedia), Net Perceptions and Alexa Internet employ collaborative filtering to make recommendations based on correlated user responses (see **Release 1.0**, 11-96 on collaborative filtering; **Release 1.0**, 5-98 on Alexa). However, where collaborative filtering identifies clusters of associations within groups, Direct Hit passively aggregates implicit user relevance judgements around a particular topic. WiseWire (now owned by Lycos) uses content analysis and collaborative filtering to categorize documents by topic. However, the topics themselves are generally human-defined, and users must actively rate pages they view. Direct Hit provides the most popular documents for any topic, rather than continuously monitoring defined subject areas.

Direct Hit partners with existing search services. As users move through those sites, Direct Hit tracks their queries and the pages they select from result lists, capturing behavior but not identities. It associates queries with more-general topics, developing a database of the sites most commonly selected for each topic. Direct Hit also considers factors such as the time searchers spend on a site once they've chosen it and the location of the site on the original results list.

A Direct Hit icon appears above the initial page of results. If the user clicks on the icon the search service displays a new list of the most popular sites for that topic. Direct Hit makes money by splitting the revenue from ad banners when users invoke the service. Its service is currently available on HotBot, and the company has also signed deals with Apple, America Online and two unannounced partners on similar non-exclusive terms.

On beyond search

By Esther Dyson

Long ago, I worked as a securities analyst on Wall Street, following growth companies for investors. One of the stocks I covered was Federal Express (whose chief operating officer was none other than Jim Barksdale). Like most people, I kept files but rarely used them. One day, as I poked into the FedEx file for some reason or other, I found my FedEx bills for some packages I had sent.

Now, whenever I tell that story to people, they laugh. But to a computer (or a less than clueful secretary), it would seem perfectly logical, wouldn't it? Keep that in mind....

Second story, more recent: some friends of mine were looking for an SGML. One of them had done a Web search and had not come up with a useful answer. I fired off an e-mail to Dave Winer, and got an answer back in half an hour, with an e-mail address for the supplier. Yes, I was lucky, but it was an altogether satisfactory experience. He copied another old friend of ours... and a good time was had by all.

Third story: Another friend sent me (and a few hundred other people) an e-mail about "developing an infrastructure and...services for using people's assessments of online documents for improved navigation, and apply them to Usenet messages." (See Resources under Sasha Chislenko.)

These tales all concern search. As Kevin notes, portals are interested in making search results good enough to please their users, but not so good that customers pass through the portal right away.... There's a fundamental conflict here, and I think it's bad news for the generic portals. Even as Disney is creating the newest brand-name generic portal, Go, hundreds of other perfectly respectable sites focused on, say, medicine or landscape gardening want to become the "medicine portal" or the landscape gardening portal, with information organized in relevant ways rather than in massive alphabetical indexes.

While the search engine companies are focusing on providing better flashlights (query tools and flat alphabetical indexes) to poke around in the dark, a more interesting approach is to build better floodlights -- to light up areas of the Net as a whole rather than pinpoint single items in it. Along with those floodlights, they are developing maps, signposts, topographical maps, building directories and other cues to help us pick out what we want -- in context.

When you look for a store or restaurant or a place to leave the kids, you consider the neighborhood: Is it expensive? Is it a shopping district or a public park? Are the office buildings old or new? And when you make your choice and walk into a restaurant, you aren't led to your table blindfolded. You look around: Is it crowded? Noisy or subdued? How old are the people? Well-dressed or comfortable? Stiff, or had a few?

When you look at content, you want to know, similarly, what's the neighborhood? Is the site well-visited? Frequently updated? Do a lot

of other sites point to this site -- a sign that it is authoritative or at least important. Do visitors come from the financial district, or do the just want to send a package? (Sites have different areas and entry points: "Federal Express" as a simple and "accurate" search term doesn't make that distinction....)

The point is not to focus not on faster queries. And making them more accurate is tough because the real problem is that people don't describe what they want. The point is to do a better job describing the Web, so that people can navigate for themselves, starting in the right neighborhood and following the right cues, and *see* what they want. Now the task of developing all the semiotics (which word does not appear in my MS Word thesaurus, but which means the symbol systems that describe or indicate things) for the Web is a huge one, well beyond the capabilities of any portal. You can buy (or rent) search engine technology, but how can you buy or even manage a catalogue for the entire Web? Even Yahoo!, the major portal with a catalogue of the Web rather than a search engine, doesn't cover most of the Net's territory. (Interestingly, it is also the most profitable of the portals, unless you include AOL in that category.)

But relax. The good news is that the Web is starting to *describe itself*. Sasha's project is more formal than most. Another company, Realize, wants to get people to rate one another's postings to improve the quality of discourse in online communities.

Everywhere, people are putting up signposts, pointing to other sites, building and sharing bookmark lists, and e-mailing links to one another. All the cross-references and hyperlinks you see on the typical Website are just parts of the human-built structure of the Web that is slowly accreting over time as people read and point and lay trails all over the Web. Companies such as IBM and Google (pages 16, 17) are building tools to detect and follow those links and aggregate them, and then let people pick sites by whether they are hubs -- with lots of outward links -- or authorities -- with lots of inward links.

Meanwhile, other people are building different kinds of catalogues and directories more consciously: systems that classify goods by price (or by some specific metric such as tube size for piping, skin tone for cosmetics, disease in medicine, chemical structure in proteins). Even the booming classifieds and auction services are a way of ordering the world of available goods and services.

Kevin worries that there's no standard language for describing everything on the Web, but that's because there's no standard language for describing everything in the world. Right now we have a Web that's opaque and constructed artificially. The major way to find things is by brute force. But in a few years, most of the content on the Web will have become much better at describing itself, through a range of methods ranging form formal catalogues to the kinds of trails people leave by their behavior. And at that point the Web will be like the real world: comprehensible up close, and visible as clearly as it needs to be from a distance.

Direct Hit has developed two additional offerings. The first, available now through HotBot, displays other topics related to the request. Direct Hit analyzes variants of the original search terms (both broader and narrower), and displays the 10 most popular alternatives. This helps users refine their searches based on the paths others have followed.

The second new service, Personalized Search, returns different search results based on the user's gender, age, geographic location or other demographic factors. Direct Hit is in discussions with potential partners to implement this technology, which considers the pages most often selected by a given group rather than the overall population.

Personalized Search raises some interesting questions. British users searching for "football" sites probably have something different in mind from Americans. (Danny Sullivan of Search Engine Watch, an American living in the UK, provided this example.) But what exactly does it mean when women prefer a different page from men? Will Third Age Media want to offer a senior citizen's search engine? What about a search engine for Republicans? Or open-source programmers? Will it be long before personalized search engines become a standard element of online community sites, along with free e-mail and home pages?[1]

Gaga for Google

Google is the work of two Stanford graduate students, Larry Page and Sergey Brin. It's perhaps too obvious to point out that industrious Stanford students also founded Yahoo! and Excite. Where Yahoo! began as a largely manual directory and gradually expanded and evolved as the creators realized its potential, Google has been designed from the ground up as a highly efficient search service.

Despite the remarkable success of portals built around search engines, there has been little published research on improving Internet search results. Page and Brin stepped into this breach with Google. As Page describes it, he was looking for a dissertation topic three years ago and decided to analyze link structures on the Web. He was originally interested in the analogy between links and academic citations, but quickly realized that link structures could be used to rank pages for relevance to search queries.

Google uses a metric called PageRank (named for Larry Page) to determine the relevance of a page to a given query. As Brin and Page explain, PageRank "corresponds to the principal eigenvector of the normalized link matrix of the Web." In layman's terms, PageRank for a given page A is derived from the PageRanks of all pages linking to A, adjusted for the number of links on each of those pages. In other words, PageRank represents the possibility that a user clicking on links at random from one page to the next, will come upon a given page. Pages that many other pages point to get higher rankings, but not all links are given equal weight. A page may come up more frequently if many sites link to it, or if a smaller num-

[1] *Market research is another possible application. Wouldn't Coke want to know that 60 percent of 18-to-24 year old men choose the Pepsi site when they search for "cola?"*

ber of more influential sites do so, because the user is more likely to reach those intermediate sites.[2]

Google assigns a PageRank to every document in the index. When a user types in a query, the search engine extracts pages that contain the search terms, and uses the PageRank data to help order the results delivered to the user. In ordering search results, Google also considers factors such as the proximity of search terms within a document and whether text is in boldface or larger point sizes. Because Google caches the full text of every page in its index, it is able to display the search term in context to help users select the most relevant document.

Google associates the highlighted words in a hyperlink not only with the page on which they reside, but also with the pages the links point to. This allows the search engine to match keywords not only on the target page, but also based on descriptions of that page by others. In many cases outside links provide a better summary of page content than the text of the page itself, especially for a computer program incapable of directly understanding that content. Google can also find pages that its crawlers don't reach, so long as there are links to them from pages the system does analyze. The tradeoff is that Google has to index many more page references this way; its initial universe of 24 million pages included 259 million links. Fortunately, the falling price of processing makes this a manageable number.

For an effective Web search service, generating results from the database is only part of the challenge. The system must have high-performance crawlers to find Web pages to include in its database. AltaVista claims its crawlers can visit 6 million pages per day; Google's architects claim that at peak rates their system can exceed 200 pages crawled per second, or 17.2 million per day (assuming they are willing to pay for the bandwidth). Google's public site currently has about 60 million pages indexed, and the company plans to release a much bigger index soon.

In September, Google's creators formed a company to bring Google to market. Page serves as ceo and Brin as president, and the company received seed funding from angel investors led by Andy Bechtolsheim. Page says that setting up a company was the best way to get Google's technology out into the world, although like most Internet entrepreneurs he identifies an IPO as the company's goal. Google is hiring engineers and planning for a commercial launch "pretty soon;" an alpha test version of the search service is available at www.google.com. Page emphasizes that search technology is a particularly rich opportunity for innovation, and that "it will be a long time before search is solved."

Boy, are those IBM guys CLEVER

Client-Side Eigenvector Enhanced Retrieval (CLEVER), a project of IBM's Almaden research center in San Jose, also uses link structure to improve search results. The technology grew out of the Hypertext-Induced Topic Search (HITS) algorithm developed by Cornell computer science professor Jon Kleinberg, at the time a visiting scholar at Almaden. According to

[2] *On the other hand, some sites such as Yahoo! have so many links in both directions that each link isn't worth much.*

Prabhakar Raghavan, senior manager of computer science at Almaden, IBM is refining the technology and discussing commercial possibilities with portals and others.

CLEVER uses an iterative process. The system begins with a group of pages related to a topic, usually obtained through an existing search engine. It then collects all the pages linked to those pages and all the other pages it can find that link to the initial group. CLEVER initially ranks each page based on the number of pages that link to it, then repeatedly recalculates the scores by giving links from pages with many links greater weight. CLEVER uses a variety of other techniques to improve relevance, for example giving greater weighting to links that contain the search term in their highlighted text and giving lower weighting to links within the same site.

CLEVER and Google both use link structure to determine the most relevant pages, but they go about this process differently.[3] As Kleinberg explains, Google first ranks and then searches, whereas CLEVER searches and then ranks. Google assigns PageRanks to everything and then uses the query terms to extract the most relevant pages. CLEVER starts with a more limited set of pages based on the query, and then generates relevance scores for those pages. Because CLEVER must query a search engine and compute rankings each time, it generally takes much longer than Google to generate results. However, CLEVER's results are more sensitive to whether a page is an authority or hub for the particular topic under consideration.

CLEVER is designed to find what the IBM researchers call authority and hub sites. Authority sites are those that contain the best information on a given topic, and hub sites provide links to many authority sites. To put it another way, hubs have many good links out, and authorities have many good links in. CLEVER gives each page both a hub score and an authority score, in contrast to Google which looks only for authorities.

According to Kleinberg, "in a lot of situations the hubs are as valuable if not more than the authorities." A good jumping-off point for a particular topic may give you more information than a specific document, no matter how relevant. In real life, for example, many people decide what movie to see by following reviewers they respect, rather than reading all the reviews of a particular movie. Websites that offer good resources or good links similarly develop reputations through word of mouth, e-mail or published recommendations (see Release 1.0, 1-98). Mechanical search engines can't understand reputations in the same way as humans, but CLEVER can leverage the human activity implicit in webs of reciprocal hyperlinks.

Because CLEVER excels at finding groups of related pages around hubs and authority sites, it is a perfect tool to uncover subject-oriented Web communities. A group of users and site owners may not even realize that they are congregating around the same set of sites, but CLEVER can find the forest of link relationships that tie those sites together. A practical use for this capability is building Web category directories such as Yahoo! The real Yahoo! employs dozens of human ontologists to sift through and categorize links. People are expensive, and even Yahoo! indexes only some 1 million pages. In tests, IBM researchers found that 81 percent of

[3] *Infoseek also analyzes link structure to improve search results.*

the time CLEVER assembled groups of category links that users found more accurate than those Yahoo! offered.

Based on work with CLEVER, Raghavan estimates that there are more than 100,000 thematically unified virtual Web communities. Members of these communities may not even realize that others share their interests, but the IBM research suggests than 96 percent of the time pages with overlapping link structures have a concrete thematic relationship.

Kleinberg acknowledges that CLEVER is attuned to communities of page creators, rather than page browsers, because the former create the hyperlinks that the system analyzes. Because different types of information on the Web have different styles of authorship, CLEVER will be more effective on some than on others.

Learning from links

Google and CLEVER do more than just find the most relevant pages. Link structure analysis suggests not only what a page means, but also what others think about it. As IBM's Raghavan points out, "relevance is not the same as authority," and link structure is an excellent way to unearth authority patterns on the Web. The Net has no central hierarchy or formal constitution, but authority does matter. People and companies follow IETF standard because the IETF has authority, not because anyone has officially delegated power to it.

A link isn't always a positive recommendation. Positive links will generally receive higher scores in CLEVER or Google because the sites they point to are more likely to link back. However, a negative review of a software product may be at least as important to a searcher as a positive one, even though the software vendor neglected to point to it. If enough other sites link to the critical information, it will show up as either a hub or an authority.

Links can also tell you more than sites themselves. As Raghavan points out, IBM's own Website doesn't talk much about IBM as a mainframe company, because of the connotations of the bad old pre-Gerstner days. However, IBM is still a leading player in the mainframe market. CLEVER would make the association from outside links even though IBM wouldn't.

Links also can tell us something about the relationship of the Web to society as a whole. According to Raghavan, most of the links on English literature are situated not in England but at American universities, because of the over-representation of those sites on the Web compared to the real world. There are far more communities around English literature than German literature for the same reason, although as the Web grows we can anticipate that such imbalances will begin to disappear. Similarly, Page says that the more wired universities (such as Stanford) tend to show up more often on Google than other campuses, because they have richer link structures.

A final benefit of link structure analysis is that it is difficult to artificially manipulate such algorithms. Both Google and CLEVER consider not simply the number of links to a given page, but how important those links are. Someone who wants an artificially high ranking can establish

dummy pages linking to his or her site, but unless authoritative sites point to those dummy pages the ploy won't be effective. Search engines such as Google and CLEVER can also use techniques based on linear algebra to identify and further devalue such artificial links.

ANSWERS, NOT DOCUMENTS

What's the point of a search engine, anyway?

Users are ultimately interested not in documents but in what those documents contain. They are looking for answers to questions, but those questions don't always map to keyword queries. Someone who uses the keyword "Ford" may be looking for the Ford Motor Company home page, prices at local Ford dealers, a biography of President Gerald Ford, an image of George Washington fording the Delaware River or something completely different. Because Boolean search engines typically treat documents as nothing more than streams of characters, they can't differentiate among these questions. They may find documents, but not the desired answer.

The problem is that we ask search engines to do things they aren't good at. In the physical world, we use the yellow pages to find the address of John's Pizza, but the Zagat's guide to find a good pizza place on the Upper West Side. Similarly, if you want the American Airlines home page, a directory service such as Centraal's RealNames works better than a search service. But RealNames won't be as useful if you're researching a history of the airline industry and looking for other papers on the topic. As Esther explains (see page 14), search services are popular partly because humans haven't yet mapped the Web themselves.

The companies we've discussed up to now take the role of search engines for granted and use new techniques to improve the results. The alternative is to change search services to focus more on answers than documents.

There's something about queries

What comes out of a search engine depends on what goes in. Keywords, even supplemented with Boolean connectors, provide limited information. And mainstream users rarely use even the Boolean tools available today. Link structure and popularity analysis to some degree compensate for the limited information in the query. In some cases, however, a richer query language, analogous to the structured query language (SQL) standard for relational databases, would be a better solution.

Query languages work best on structured data. Interest in Web query languages has therefore paralleled work on XML, RDF and other standards to add structure to Web documents (see page 3). In early December, the W3C held a query languages workshop to begin thinking about requirements and solutions. More than 90 W3C members participated, and so far 66 position papers have been posted on the W3C Website.

Others such as Ask Jeeves and Lexeme are working on new query systems that go in the opposite direction. Natural language processing allows ques-

tions to be expressed directly rather than as keywords, making it easier for mainstream users to express what they're looking for.

Ask not what Jeeves can do for you...

Ask Jeeves is designed to make it simple for users to ask questions and receive direct answers. It offers a natural language interface tied to a custom knowledgebase of common question and answer types. The company was founded in Berkeley, CA, in 1996. President and ceo Rob Wrubel came from educational software publisher Knowledge Adventure in June 1998. He says that "most people don't want everything," when they query a search service; they prefer high-quality results pre-selected by trusted editors.

Ask Jeeves responds to queries with a list of related questions that it can answer. For example, "Who won the World Series in 1980?" brings back "What happened in the World Series of the year 1980?" along with "Who won Tony Awards in 1980?" "What was unique about the 1905 World Series?" and several other choices. The user selects the most relevant question, which links to a Website that has the answer. Ask Jeeves also includes a meta-search engine that provides more traditional results if the knowledgebase is insufficient. The recent NPD survey ranked Ask Jeeves first in overall effectiveness out of 12 major search engines. The results, however, show just how far everyone has to go. Only 24 percent of Ask Jeeves users found information they were looking for "every time," yet that was the best score in the survey (tied with GoTo).

Wrubel argues there's more to search than answering the narrow question in the user's head. When Ask Jeeves doesn't have a good response, it says so, rather than providing a long list of weakly-related results. This helps put users at ease, giving the Net "a more humanized face." Wrubel believes even answers that seem off-target, like the one above about the Tony Awards, help illuminate possibilities the user may find interesting.

Ask Jeeves' natural language processing engine considers both semantic and syntactic factors to extract the essence of a question. The system's knowledgebase contains alternate forms of common questions, mapped to one or more templates that link to Web pages with the relevant answer. Ask Jeeves uses human researchers to find useful Websites that are incorporated into the answer templates. The researchers monitor the stream of questions from users and develop new question and answer templates for common queries.

Ask Jeeves is available on a standalone site and through AltaVista. The company also offers a separate site designed for kids. In December, Ask Jeeves launched a tailored version of its service on the Dell Website called Ask Dudley. Much of the knowledgebase is specific to Dell, but some of the question and answer templates will contribute to the general Ask Jeeves knowledgebase.

Wrubel says Ask Jeeves could become a sort of "portal's portal," helping users navigate the sprawling content networks of the major portals. Google and Direct Hit aren't threats, he says, because Ask Jeeves sits higher in the value chain. Libraries offer both comprehensive card catalogs and reference librarians who can recommend good resources. By analogy, most

users will look to editorially-selected sites first and then use open-ended search services as a backstop.

Search from the inside out

Search engines are like mainframes: they put all the intelligence at the center. In theory, pushing processing out to the endpoints would be more efficient, for the same reasons the Internet has triumphed over centralized networking models (see **Release 1.0**, 6-98). But search depends on universal coverage, and the only way to assure that something gets indexed is to do it yourself.

Distributed indexing systems such as Harvest and WordCruncher have been around for several years. Sites generate local indexes in a common format, and the central search engine need only tap into those indexes rather than crawling the raw pages. These systems can be effective for small communities, but on the Internet as a whole there's no way to guarantee that all sites will generate and update their indexes.

WordCruncher, based on technology developed in the 1980s at Brigham Young University, is used in universities to search local documents and databases. In late 1996, James Johnston and Daniel Lunt formed WordCruncher Internet Technologies to bring WordCruncher to the Web. The company has licensed the technology from Brigham Young and plans to launch in the first quarter of 1999.

Lexeme: Lexical memes

John Clippinger, ceo of Lexeme, believes that improvements in processing power and algorithms have finally made it possible to extract knowledge automatically out of unstructured text. Clippinger developed one of the first corporate intranets for knowledge management while at Coopers & Lybrand. He founded Lexeme with cto James Pustejovsky, a professor of computational linguistics at Brandeis University, and vp of business development Jim Keller, formerly with the Harvard Information Infrastructure Project. The company, based in Cambridge, MA, will make a company presentation at PC Forum.

Lexeme's engine parses text to extract entities, relations and concepts. It can distinguish objects from their characteristics, and can identify related or identical concepts even if they use different words. The engine in effect creates its own categories and populates a relational database with lexical objects, which can then be searched through a query interface. Traditional Boolean search engines look at files as merely strings of ASCII characters. Clippinger says that "English is the mother of all protocols," and therefore search engines must understand language to extract the full meaning from documents. Lexeme processes actual linguistic structures as objects, which gives it a rich understanding of concepts and attributes. Where Ask Jeeves uses human editors to hard-code question and answer templates, Lexeme organizes information automatically.

As Pustejovsky puts it, "We're in the business of providing answers, not hits." Lexeme uses a conversational natural language interface, rather than the more rigid structure of Boolean queries. The system is designed to bring back specific information that addresses users' needs, instead of a list of documents containing related material. By making both queries and content representations richer, Lexeme brings to bear the penumbras of meaning surrounding words (see page 1). Pustejovsky draws an analogy to the human genome. Identifying the building blocks isn't enough; you need to understand something about structure and have a model of how the components interact.

Lexeme's technology has broad application, although the startup is initially targeting vertical markets where it can generate high margins. Medstract.org, a site funded by the National Institutes of Health, is using Lexeme's technology to develop a database of functional characteristics of genes and proteins from scientific abstracts available through the Medline service. New research arrives daily, which is why Lexeme's ability to automatically organize information is so valuable.

Another area Lexeme plans to address is customer service for electronic commerce sites. The Lexeme engine will allow users to find the customer support information most relevant to their problems (for more on this market, see **Release 1.0**, 9-98). Because of the processing involved, Lexeme's system doesn't make sense for searching or "understanding" the entire Web, but it could serve as an adjunct to existing search services. Lexeme is talking to several portals about licensing deals.

ONE SIZE DOESN'T FIT ALL

No search engine will ever be flawless, because people have a variety of needs. Do they want a specific answer, or an opportunity to rummage through related materials? Are they willing to trust others' judgments about what's interesting, or do they want to make their own determinations? Different tools may work better in each of these situations. (This is similar to the point we made in a previous issue about content labels. See **Release 1.0**, 5-98.)

The technologies we describe can improve search results, but they can't replace the human brain. Users don't always know what they're really looking for, and sometimes it changes depending on what they find along the way. The concept of a universal search engine has seductive appeal. As the artificial intelligence community has learned, however, some challenges are more difficult than they seem.

Search engines are like the map in the Borges story: They can only achieve perfection at a scale of 1:1, at which point they save no time at all. Yet there is real value in making search engines less imperfect. The Net isn't getting any smaller; people will always need tools to find what they're looking for. The companies discussed in this issue deliver significant enhancements in usability and result quality. But there's plenty of work left to be done. Because it invokes deep concepts such as meaning, search will remain a challenge for a long time to come.

COMING SOON

- *Cable and the future of the Net.*
- *How big companies innovate.*
- *Portals vs. portholes.*
- *Wireless and embedded networking.*
- *The Net swallows the phone network.*
- *Living on the Web.*
- *And much more... (If you know of any good examples of the categories listed above, please let us know.)*

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Except as noted otherwise, all companies' Websites are at the likely address, http://www.domain_name.com.

For further reading:

Steve Lawrence and C. Lee Giles, *Searching the World Wide Web*, **Science**, April 3, 1998 at 98.

World Wide Web Consortium Query Languages Workshop -- www.w3.org/TandS/QL/QL98/Overview.html

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Bacon's

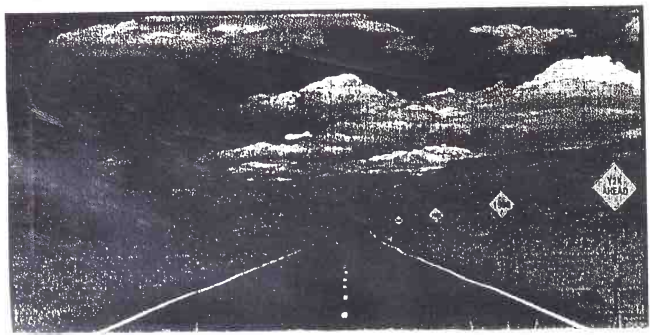
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14

THE ROAD BEHIND

It's Y2K minus [illegible] and counting. Do you know where your bugs are?

By Morgan Frew

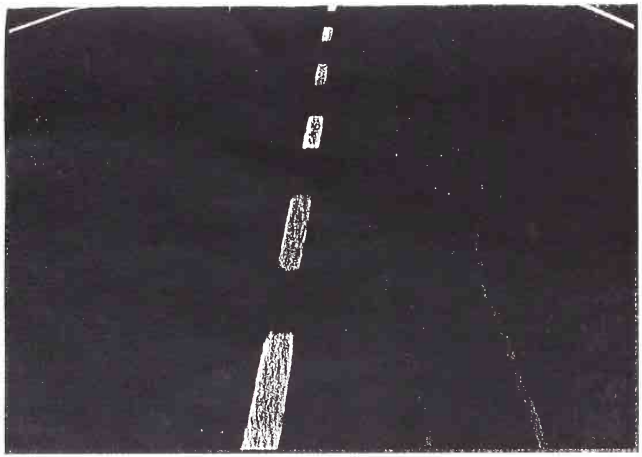


video testimony during a government investigation. But let's not dwell on Bill Gates more than necessary.

The real news of 1998 is that it brought us within spitting distance of 2000 and the end of the world as we know it. Many of the most vocal pundits in the technology world (the cab drivers at Comdex) confidently stated that between 11:59 p.m. on December 31, 1999, and 12:01 a.m. the following day, elevators would stop elevating, Viagra would stop invigorating, Santa would accidentally be shot down by

families with their food storage needs since 1953") took advantage of the growing millennialist-cum-survivalist paranoia with heartwarming bulk e-mail offering a complete, nutritionally balanced food storage program for as little as $1.55 per meal, per person. (Spam not included.)

Publishers jumped on the bandwagon. The usually calm *Utne Reader* stuffed recent issues with the breathless *Y2K Citizen's Action Guide* (also available at **www.utne.com/y2k/index.html**) chockablock with such



Bill Gates may not be roadkill—yet. But your PC just might be a casualty on the night of December 31, 1999. Should we worry about the fate of Gates? Should we fret about our PCs time-stamping our unread memos with "January 1, 1900"? Should we look forward, angel, and start stuffing our mattresses with doubloons in case the world grinds to a halt in just 12 short months?

Nah. Let's look back, not in anger, but in wonderment. After all, 1998 showed us a live birth on the Internet. (Luckily, RealNetworks' RealSmeller software was still in beta.) We saw a septuagenarian blast off into space and crash repeatedly (that is, if you watched the "live" video feed at CNN.com). In 1998, we saw sordid deeds uncovered in

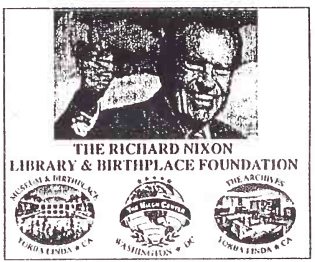
NORAD, and credit cards would become worthless. Of course, these same cabbies confidently claimed they couldn't break a $10 bill for a $6 fare.

Y2K: A Bug's Life

Despite prophecies of doom, Hershey began to tout M&Ms as the "official candy" of the new millennium. (Think Roman numerals.) The computing world followed suit by plastering "Y2K-compliant" stickers on everything it sold this year. Not every company could make this claim, though. Microsoft's much-vaunted Windows 98 needed an urgent update in early December to fix "a few minor problems" with the millennium calculations. These included flaws in Microsoft Wallet (an e-commerce tool), the Phone Dialer's log, Date/Time's handling of leap years, Microsoft Foundation Class Library (the supporting object code for innumerable Windows applications), and the Xcopy utility. Windows 98's Java Virtual Machine also had problems, but Microsoft pinned the blame for that on Sun Microsystems.

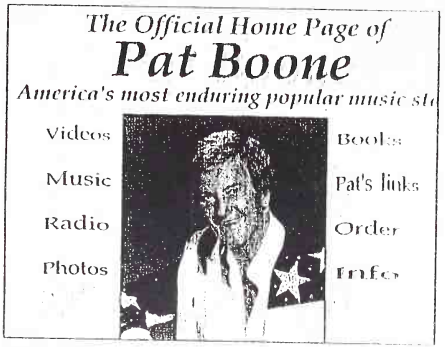
However, millennium fever proved to be a great promotional tool. Salt Lake City–based Perma Pak Foods ("helping

tidbits as "If life is a process of discovering who we are, Y2K is when we find out." Few of the essays, such as "From Chaos to Coherence: The Emotional Challenge of Y2K," were written by computing experts.



*Why is this Web site laughing? For a mere $1,000, the Richard Nixon Library & Birthplace Foundation (**www.nixonfoundation.org**) offers The President's Council membership, which includes a handsome RN pin,* The White House Family Cookbook, Pat Nixon: The Untold Story, *your corporate name enshrined on the White House Circle Honor Wall in the Library's Reception Lobby, a set of official lapel pins, an autographed print of Charles Wysocki's painting,* The Young Nixons, Home Sweet Home, *and complimentary tickets to a special VIP event featuring "a prominent national or international figure."*

Not to be outdone, computer publishing giants Ziff-Davis Publishing, cnet, and International Data Group all registered Internet domain names devoted to extending the panic by whistle-blowing on companies and government agencies that don't have Y2K fixes in place. Thousands of COBOL programmers found their formerly redundant skills in demand again. And Pat Boone found that



Would you buy a Y2K fix from this man? Pat Boone, Y2knet's spokesperson—and leading interpreter of Little Richard—brings Y2K consciousness to the blue-haired crowd.

becoming a spokesperson for the Year 2000 National Education Taskforce (**www.y2knet.com**) worked wonders for boosting traffic to his official Web site (**www.patboone.net**).

Year 2000 Predictions

Just how bad is the Y2K problem? Thanks to in-depth polling, massive database scanning, and checking the Sunday papers, we've unearthed the true breadth, width, and depth of the problem. In no particular order, these are the biggest Y2K concerns.

- 2000 will be a leap year, and most Y2K efforts don't address the February 29, 2000, problem.
- Toilet paper supplies will run out.
- At the end of the year, radio stations playing Prince's "1999" will reach epidemic proportions.
- A record-breaking earthquake will level Tokyo. Or a giant, fire-breathing lizard will.
- Plagues, diseases, and pestilence will sweep the country. Or Al Gore and Bill Bradley will induce nationwide narcolepsy during their debate.
- Since there are 1024MB in a gigabyte, but many PC makers call it an even 1000MB, the real problem will come in 2048.
- By July 1999, money supply worries will cause a run on the banks.

Continued on page 20

Just Shoot Me!

The year in quotations

I Also Brought Peace to the Middle East

"The PC became the NC. I'll be remembered for bringing down the price of a PC."

—Larry Ellison, CEO of Oracle

would have addressed. President Nixon was very suspicious of computers, though, and wouldn't sign off on it. Without his proclamation we couldn't do it. I think he'll go down in history along with King Canute."

—Bob Bemer, codeveloper of COBOL

It Just Breaks Down More

"There are more than twice as many opportunities for Windows-based computer services careers in America than there are for jobs focused on the combined proprietary technologies of IBM, Novell, Oracle,

Let's pie the polluting lolly!'"

—Noel Godin, Belgian filmmaker who threw pies at Bill Gates

Ain't Nothin' Like the Real Thing, Baby

"Maybe the band and I could just

"[AOL] has a real shot at someday becoming the most respected, and most valuable, company on earth."

—Steve Case, CEO of America Online, in Wired News

Someone Get Me Fact Checking!

"The era of the PC is over."

—Lou Gerstner, CEO of IBM

Someone Get Me Fact Checking, Part Two!

"There was no such thing as the Internet five years ago."

—Neil Herman, Salomon Smith Barney technology analyst

Drink My Kool-Aid

"People are guaranteed to get results if they develop a Web site with the methods I propose. I am going to be a guiding light."

—Jakob Nielsen, Sun engineer turned user interface consultant

Blame It On Nixon

"I proposed a national computer year back in 1970 … The year 2000 [problem] was just one of the issues we

Pass the Year 2000–Compliant Salt

"I want to bring Y2K to the family dinner table."

—Pat Boone, spokesperson of the Year 2000 National Education Taskforce

L'Internet, C'est Moi

"We are the best example of how the Internet is going to change everything."

—John Chambers, CEO of Cisco

$ = MC^2

"Einstein would have put his stamp of approval on everything we've done."

—Robert Freeman, vice president of Silk Road, an optical networking start-up

Le Portal, C'est Moi

"A portal is a search engine trying to be AOL. We're already AOL."

—Barry Schuler, AOL

The Only E-mail Humor of the Year Worth Repeating

"When John Glenn returns from space, everybody dress in ape suits. We have nine days in which to bury the Statue of Liberty up to her head."

—Author unknown, November 2

—Bill Gates

Same Old Stuff, Just Cooked Longer

"I'm not supposed to tell you this, but it's just our regular house blend left in the roaster a little longer."

—Café Espresso employee describing Borders' Windows 98 coffee, officially described as an "Indonesian and South American Arabica coffee bean blend"

My Job Is Degrading

"My job is not to compete with Microsoft. It's to lower the value of the operating system market."

—Bob Young, whose Red Hat Systems is the main commercial supplier of Linux

My Family Knows All About Subjugation

"Computers should be the slaves of children, not the other way 'round."

—Princess Anne

Pie Our Square

"Bill Gates was at the top of our list of victims. The attack against him is symbolic; it's against hierarchical power itself. Our war cry was explicit: 'Let's pie!

… kind of herky-jerky … to give the live audience the Internet experience."

—Victoria Williams, who performed at Intel's New York Music Festival

I Think, Therefore I BS

"The Internet is the great democratizer; it's about what I think, not about what the media thinks."

—Josh Quittner, editor of Time Daily

Just Call Me Albert Schweitzer

"Money is not my measure of success. I want my epitaph to read 'He made a cultural impact.'"

—David Talbot, editor in chief of Web-based magazine, Salon

Cures All Ills, but Keeps On Crashin'

"Instead of letting the cancer patient die, we have a cure, and the cure is Windows."

—Microsoft executive Tod Nielsen, countering Justice Department lawyer David Boies' statement, "What Microsoft is saying as a defense is, if somebody shoots you, they can defend that by saying you had cancer."

Continued from page 19

• Paper money will lose value, with barter and exchange of gold and silver taking the place of modern commerce.

• Biblical scholars point out that Jesus was actually born in 6 B.C. Apparently, developers of the Gregorian calendar used flawed Pentiums to calculate the crossover year between B.C. and A.D., so it's actually a year 2006 problem.

As yet, no Y2K+6 task force has been announced, but we feel confident that Pat Boone will be there for Americans when it is.

I Do Not Like That, Spam-I-Am

In other news, 1998 saw the end of the Spam King's reign. Back in 1997, Sanford Wallace was cheerily invading every e-mail box in the world with cunningly crafted pitches on behalf of his paying clients. In 1998, he officially retired, but unwanted Internet-based advertising continues. Widget vendors looking to drum up trade online can now turn to Alexa. The company, which provides the data for Navigator 4.x's What's Related feature, is charging hefty sponsorship fees for two links in the list. If that approach doesn't appeal, there's always the Goto.com search engine, which will put your vitamin supplement Web site at the top of its results page for a fee.

For those who yearn for the TV experience online, Zing touts a technology that displays "entertainment" (like music clips or flash cards in French) along with advertisements, while you wait for Web pages to download. One thing in Zing's favor is that the ads are only 10 percent of the mix, about half that of commercial TV.

Spam will survive any Y2K problems—until you open the can.

Hotwired



The darling of Apple Computer and Madison Avenue reminded Web pranksters of another miracle of marketing. Just add water and plug into the wall. There is no third step.

The Lowest Prices Guaranteed!

NEPTUNE COMPUTER CORPORATION

OUR COMPUTER SYSTEMS

All systems include:-
Fully Upgradable Motherboard
32MB Ultra Fast 100MHz SDRAM
2MB SVGA PCI Video Card
4.3GB Hard Disk Drive
CD-ROM Drive
16-Bit Sound Card
14" SVGA Monitor 0.28
Mitsumi Keyboard and Mouse

The Prices:-

Pentium MMX-233	$619
Cyrix MII-333	$599
AMD K6-2-300/333	$599/619
AMD K6-2-366/400	$669/749
Celeron 300/333	$629/649
Celeron 366/400	$699/769
Pentium II 350/400	$749/849
Pentium II 450/500	$949/1299
Pentium III 450/500 Katmai	Call

Options:-

64MB SDRAM Upgrade	$19
128MB SDRAM Upgrade	$159
6GB Hard Drive Upgrade	$29
12GB Hard Drive Upgrade	$129
Diamond Stealth 3D	$35
Zip Drive	$79
DVD-ROM Drive Upgrade	$59
TR-4 8GB Tape Drive	$199
SoundBlaster 128 PCI	$69

Mini Tower Case
200W Power Supply
Dual Pentium II ..... From $999
Dual Pentium II Xeon ..... From $1699
Please visit our web site for more details
15" Monitor Upgrade $19
Super Mini Tower Case Upgrade $9
Many more options available - check web

OUR COMPUTER COMPONENTS

Motherboards
Cyrix MII-300/333 ..... $129/169
AMD K6-2-300/333 ..... $159/179
Pentium MMX-233 ..... $159
Celeron 266/300 (32K) $159/169
Celeron 300/333 (128K) $209/239
Pentium II 333/350 ..... $299/349
Pentium II 400/450 ..... $499/699
Dual Pentium II 440LX (No CPU) $119
Dual Pentium II 440BX (No CPU) $199
Dual Pentium II Xeon ..... Call
Quad Pentium II Xeon ..... Call

Memory
32MB SDRAM DIMM $45
64MB SDRAM DIMM $89
128MB SDRAM DIMM $169
ECC and PC100 SDRAM DIMM ..... Call
HP LaserJet Memory ..... Call

PCI Video Cards
S3 2MB DRAM $18
Diamond Stealth II S220 4MB $49

AGP Video Cards
Intel I740 8MB $49
Diamond Stealth G460 8MB $69
Matrox Millennium G200 8MB SDRAM $99
Diamond Viper V550 16MB $179

Other Cards
OPTI Sound Card $11
Sound Blaster 16 PnP $26
Sound Blaster 16 PCI $31
Sound Blaster 64 AWE $45
Sound Blaster 128 PCI $59
Adaptec 2940UW PCI SCSI Card $169
Lucent 56K PCI $35
Supra 56K PCI V90 ..... $55
US Robotics 56K $85

Disk Drives
8GB EIDE Hard Drive $169
12GB EIDE Hard Drive $239
32x CD-ROM Drive $39
DVD-ROM Drive $69
1.44 Floppy Drive $18

Monitors
14" SVGA Monitor 0.28 ..... $109
15" SVGA Monitor 0.28 ..... $129
17" SVGA Monitor 0.28 ..... $219
19" SVGA Monitor 0.26 ..... $439

Other Items
Mitsumi Keyboard $12
Microsoft Natural Keyboard $29
Bob Mouse $5
Logitech Mouse $14
Microsoft IntelliMouse $23
Super Mini Tower Case $32
Mid Tower Case $39
Full Tower Case $49
ATX Mid Tower Case $59
TR-4 8GB IDE Tape Drive $199
Iomega Internal IDE Zip Drive $69
140W Speakers $19
320W Speakers $39
Subwoofer $79
Condenser Microphone $5

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http://www.buycomputer.com

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Despite a pack of handheld computers running Windows CE, the real top dog was 3Com's PalmPilot line. The PalmPilot seems to do everything people want and it *doesn't* do it with Microsoft software—a double boon. In fact, one Palm software developer even programmed the PalmPilot's infrared port to act as a universal TV remote control. Better yet, users in the UK discovered that the PalmPilot could also record the code on infrared automobile security systems. If you played back the code with your PalmPilot, you could pop open a Chrysler or Mercedes and disable its alarm system. A PalmPilot spokesperson, quoted in *New Scientist*, saw the bright side of this unexpected boon for car thieves. "Say someone wanted … their car code stored in their PalmPilot, just in case they forget their keys."

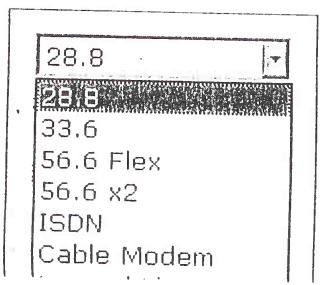
It's unclear whether that spokesperson will survive the year 2000 transition in her current job.

America—and Australia—Online

1998 was a banner year for America Online, and it has the invoices to prove it. As part of its spend, spend, spend policy, the company sank more

than 4 billion dollars into acquiring Internet businesses ICQ and Netscape. And at the beginning of the 1998 holiday season, it ran the longest and most expensive ad in history: the Meg Ryan/Tom Hanks movie, *You've Got Mail*. Ignoring verisimilitude, these keyboard lovers never misspelled a word, much less encountered busy signals or dropped lines.

In a further attempt at world domination, AOL went down under, adding Australia, along with Europe, to its fold. (The service still goes by the acronym AOL everywhere outside of the U.S.) Has AOL gotten a swelled head? No way, mate, although some sign-up CD-ROMs do note they hold "the entire Internet plus more, exclusive content."



Instead of ushering users to other companies' sites, why not drown the search engine in news tickers, Web-based e-mail, weather reports, TV listings, and other "content," so that visitors will stick around?

The plan paid off, drawing money from advertisers and corporate suitors. Disney bought a huge stake in Infoseek. NBC invested millions in cnet to get a piece of its portal, Snap.com, and Lycos bought HotBot and Wired.com, thereby becoming two portals at once.

Source for the Goose

Netscape's browser steadily lost market share to Microsoft's Internet Explorer in '98, despite the Department of Justice's best efforts. Clearly, drastic measures were called for. So Netscape threw in a bonus along with its free Communicator 4.5 suite: You could download the suite's source code for free, too.

But Linux and other applications really turned Open Source Software (OSS) into front page news in 1998. If you believe reports forwarded to the Open Source site (**www.opensource.org**) from a supposed Microsoft insider, it has Microsoft piddling in its Dockers.

The so-called Halloween documents

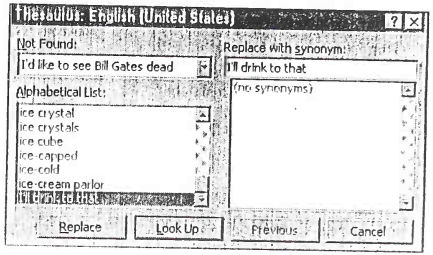
Online bought the company. Microsoft lawyers then held that the newly merged companies were a second online superpower to rival Microsoft. That's when some states considered dropping their antitrust lawsuits. (For more on Microsoft's 1998 adventures, see "Microsoft's 1998 Timeline" at **www.currents.net/covr**, where you'll also find the sidebar, "The 1998 What Were You Thinking? Awards.")

The open source Netscape browser crew, residing at **www.mozilla.org**, remains unimpressed by the Netscape/AOL merger. As the hacker-in chief of the project, Jamie Zawinski, commented at his site, "Mozilla.org is not Netscape. And it is not now, nor will it ever be, AOL." Now that's what journalists call an open source.

Comeback of the Year

Apple Computer snatched itself from the jaws of defeat (again) in '98. After pulling the plug on the eMate—the cute, translucent $600 laptop it

a live, Web-based broadcast of a woman giving birth. The spectacle drew a record-breaking half-million online viewers and tripled demand for the RealVideo player overnight. The child's father was featured on America



It's not exactly an Easter Egg: Type in this phrase in Word 7.0 or Word 95 and you get this cheery suggestion. Skol!

Online's AOL Live chat on Father's Day the following week.

In an attempt to cash in, a shrewd businessman named Ken Tipton began promoting a prequel of sorts called Our First Time, a Web site where all-American teenagers Mike and Diane would supposedly yield their respective virginities to each other. (An event unlikely to match the six-hour duration of the live birth.) The proposed deflow-

Leased Line Courier Pigeons

Forget DSL and T1. One ISP (via ISPcheck.com) knows how to deliver bandwidth!

What's the secret of AOL's success? Hyperbole? Cranky phone lines? Steve Case's cute-as-a-button pageboy haircut? Mais non! "It starts with e-mail," says Barry Schuler, president of AOL Interactive Services at Internet World in June. "Then you get them interested in a buddy list, so they can find their friends and family." After that, you presumably move them on to hard drugs and really start charging.

Any Portal in a Storm

In 1998, search engines finally called it quits and decided that their new, politically correct name should be portal. The reasoning was that if a search engine does its job right (no laughter, please), it should deliver what you want within the first two results screens, pointing you to the desired site.

For an advertising-driven medium, though, sending users away didn't make much sense. Enter the portal concept.

(**www.opensource.org/halloween.html**) include a technical report on OSS by a Microsoft engineer, complete with commentary from other Microsoft employees, describing OSS as "a direct, short-term revenue and platform threat to Microsoft," with benefits that "present a long-term developer mindshare threat." The documents talk about tactics for crushing Open Source competition, whining that fear, uncertainty, and doubt (FUD) won't work this time. "OSS is long-term credible ... FUD tactics cannot be used to combat it."

In the short term, OSS may prove to be helpful to Microsoft. Shortly after Netscape took up the idea, America



Illustration © 1998 by Peter Georgeson. From Bill Gates 99 Paper Doll Book, www.beckermayer.com.

introduced last year—the company needed a headline-grabbing computer. It found one in the translucent iMac, which looks like a wedge of cheese with a keyboard attached—a design so distinctive that it's easy to overlook little details, like the absence of a floppy drive or SCSI ports. The ad blitz for the iMac ran the gamut from the usual sniping at PCs (as an acronym for "perpetually complicated," "profusely corded," and so on), to celebrity endorsements (Jeff "Brundlefly" Goldblum elatedly describes how he "joined the party" online).

The iMac's real advantage lies in product placement, a fact that Apple didn't miss. By December, an iMac appeared on Laura San Giacomo's desk in the TV series, *Just Shoot Me*. This advantage could be short-lived, however. PC maker eMachines has already released fully configured 300MHz PCs for a mere $499, sans monitor. And it has a built-in floppy drive.

Live Birth, Live Sex

This year, streaming Web video turned from a trickle into a torrent. On June 16, America's Health Network Web site (**www.ahn.com**) used RealVideo for

Continued on page 22

Most Popular Names Among High-Tech PR Reps

In ascending order by sex ...

Kate/Cathy/Kathy/Catherine/Katherine
Sue/Susan/Suzie/Susie/Suzanne
Jennifer
Mary/Maryanne
Pat
Amy
Kimberly
Kirsten/Kristen/Kristine/Kris
Michelle
Debbie/Deborah
Lisa/Lesa/Lysa

Dave
Mike
Dan
Bill
Jeff
Steve
Bob

The Computer Currents 1998 Harpy's Index

Number of pies thrown at Bill Gates by Belgian dadaist Noel "Le Gloupier" Godin and his gang: 25

Number of pies that connected with Gates' face: 4

Number of pies thrown at San Francisco Mayor Willie Brown by the Biotic Baking Brigade: 3

Number of pies that connected with Brown's face: 3

Dollars spent by America Online to purchase ICQ in June: 287 million

Dollars spent by America Online to purchase Netscape in November: 4.3 billion

Increase (in dollars) of America Online's monthly access fee: 2

Cost of a 2.1GB SCSI-2 hard drive in December 1996: $485

Cost of a 2.1GB SCSI-2 hard drive in December 1998: $130

Number of workers laid off during SyQuest's bankruptcy restructuring: 950

Average number of hours tech support representatives spend each day answering calls: 5.5

ering generated outrage from the expected quarters, quickly followed by the news that the "teenagers" were a couple of out-of-work actors in their twenties and were unlikely to be doing anything for the first time. Tipton backpedaled furiously, called the whole thing off, and posted the shooting script he had written, which revealed a surprise: The camera would swing away before anything happened and zoom in on Tipton, who would deliver a monologue about abstinence and true love.

It wasn't until a certain special prosecutor released a report about a certain Leader of the Free World that Web surfers could finally get their kicks. The posting of the Starr report online flooded the CNN site with visitors—340,000 requests per minute at its peak. By the time Clinton's videotaped testimony appeared, Net frenzy hit a new high (or is it

ington Post reported that the online copy (originally written in WordPerfect) contained deleted footnotes that weren't in the printed version. Apparently, converting the document to HTML removed the Delete tags. Deleted information included Monica Lewinsky's speculation about President Clinton's relationship with journalist Eleanor Mondale.

The Clinton administration may not be compliant with 2000—or with 1999.

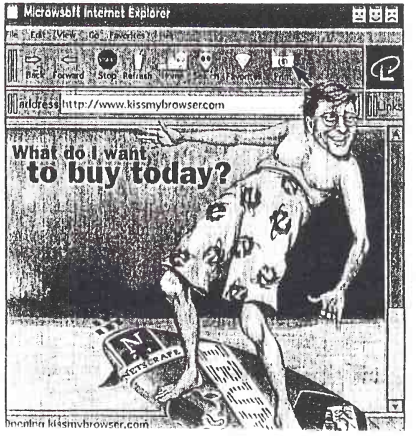


Illustration © 1998 by Peter Georgeson. From *Bill Gates 99 Paper Doll Book*, www.beckermayer.com.

Pentium II. The idea was that people would vote for their favorite (or least favorite?) bunny, and the one that garnered the most votes would be revealed before the end of the game. Several thousand votes and cases of beer later, the culprit was revealed. Reports vary, but the villain was apparently a Budweiser frog.

In spite of the PR blitz, Intel had to face reality—the Pentium II was too darned expensive. Accordingly, the Lords of Silicon introduced a low-cost chip, called the Celeron, to cash in on the sub-$1,000 PC craze (later known as the sub-$800, -$700, -$600, and -$500 PC crazes). The trouble was that the first Celerons were cheap in every sense of the word, creeping like snails because they lacked any cache. Several system manufacturers suckered into purchasing these first chips refused to send their Celeron-based PCs out to publications for review.

To make things worse for Intel, Bill Gates publicly accused the company of developing substandard code during an antitrust hearing. Clearly, Microsoft wanted a monopoly on substandard programming.

However, Intel rallied in the last half of the year by taking a leaf from the

Percentage of tech support problems solved on a first call: 50

Average length of employment for tech support representatives, in months: 15

Dollar amount reportedly paid by Compaq for the domain name **www.altavista.com**: 3.35 million

Percentage of connections to the *Seinfeld* Web site that failed during the show's last episode, according to Keynote: 20

Percentage of U.S. PC owners with Pentium or faster processors: 50.2

Percentage of U.S. home PCs with 28.8Kbps or faster modems: 48.7

Dollars shaved from Bill Gates' net worth during stock market dip on August 31: 5 billion

First day's audience for America's Health Network's Web broadcast of a woman giving birth: 560,000.

First day's audience for RealVideo Web broadcast of Clinton's videotaped testimony: 2 million

Number of days between widespread news coverage of Our First Time live sex site and discovery that it was a hoax: 2

Number of words in Amazon.com's press release addressing criticisms from Barnesandnoble.com: 1 (The word was "Oh")

a new low:), with 2 million viewers tuning in during the first day.

It took an icon from the 1960s to really send Net viewership figures through the roof. (And it wasn't Pat Boone.) Just before astronaut–senator Tang-achiever John Glenn was shot into space, CNN's servers handled 494,000 hits per minute, 45 percent more than their previous record. The picture was tiny, fuzzy, frequently dropped, and had dreadful sound quality—just like the TV broadcast of the first time Glenn went into space.

In 2000, John Glenn is scheduled to turn 79.

You Can Delete, but You Can't Hide

In July, the *New York Times* exposed a problem with Microsoft Office 98 for the Mac. Some files created with Office 98 contained data from previously deleted versions that, while hidden from Word users, was clearly visible when opened in another word processor. After several weeks, the company made a bug fix available for download. But hidden text problems reared their heads again when the Starr report was posted online in September. The *Wash-*

Where's the Remote?

San Diego–based software company NetPartners calculated that making the Starr report available online cost U.S. businesses millions of dollars. The company estimated that half of the 27 million downloads were performed at work. Reckoning that an average employee costs a business $35 per hour and that it took an hour to download the file on the nation's overloaded Net, the lost productivity totaled more than $470 million. By the way, NetPartners makes software that prevents employees from accessing unauthorized Web sites.

Intel Goes Ballistic

Even before the retirement of leader Andy Grove, Intel's year took some interesting turns. Grove made the cover of *Time*, accompanied by an adulating article about his rags-to-riches life. The company also backed *One Digital Day: How the Microchip Is Changing Our World*, Rick Smolen's unwitting paean to most things Intel. To top it off, Intel ran an interactive Superbowl TV ad that had viewers guessing which of three clean room workers had stolen a

open source code movement. It granted a royalty-free license to the U.S. government to develop a radiation-proof Pentium processor for use in spaceships, satellites, and military equipment.

By taking Intel up on this offer, the government increased the processing power of its ballistics systems and shaved millions off its budget, too. At the same time, it guaranteed that the Feds would distribute Windows into a formerly untapped market: outer space. This leads us inexorably to 2001, which will be next year's big thing.

"Open the pod bay door, HAL."

"I'm sorry, Dave. But there's a General Protection Fault in module KRNL32.EXE." ★

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Morgan Frew's source code is available for download from ***www.currents.net/covr****, but it can't legally be modified. He has been certified Y2K compliant by an independent testing authority.*

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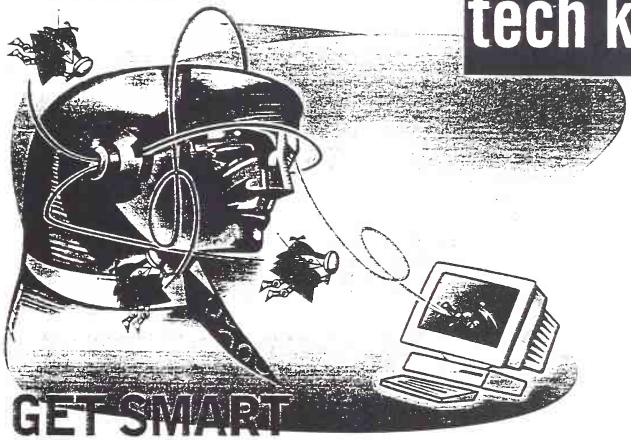
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tech know

BY CLIVE THOMPSON



GET SMART

CAN INTELLIGENT AGENTS HELP WITH THE INFO-GLUT?

PICKING YOUR FAVOURITE MUSIC IS, of course, a deeply personal matter of taste. But lately, I've been getting advice from a piece of software.

It's a program called Firefly, which runs at a music-fan Web site called MyLaunch. The Firefly software analyzes your listening habits, compares them with the listening habits of other people, and then tries to predict new albums you'd like. After analyzing me, the Firefly engine offered up two albums it claimed that I would enjoy. One was Prodigy's *The Fat of the Land*, a bit of throbbing, angry British techno that became infamous in 1997 for its controversial track *Smack My Bitch Up*. And the other recommended album? A compilation of greatest hits from lounge-king Burt Bacharach.

You could snicker. But despite appearances, this sort of digital psychoanalysis is part of the latest booming trend in technology tools—"intelligent agents."

A sort of sidetrack in the hunt for artificial intelligence, agents have been beta-ed and talked about for years. But now, intelligent agents are finally becoming an everyday reality, in the form of a variety of downloadable software tools and specialized Web sites.

Mostly, these agents are designed for a simple purpose: to help us handle the info-glut. As their name implies, they're supposed to be more than just passive filters. Instead, these agents actively track our surfing and clicking, learning what we like, and then pointing us toward new material they assume we'd like. Or they troll the Net, hunting for news for us while we're off-line doing something more important, like the dishes, or maybe thinking.

In many ways, agents point to the stinging paradox of our times: We live in an Information Age where there is too much, uh, information. Three years ago, we complained that there was "nothing on the Net." Now, with the boom in news sites, instant stock quotes, bug-eyed investor E-zines and dancing-baby ephemera, data are dealt out by the shovelful, and the signal-to-noise ratio is getting simply unruly.

"People are getting deluged—there's more out there than anyone can deal with on their own," says Henry Lieberman, a research scientist at the Massachusetts Institute of Technology who studies the field. For most Net users, he notes, finding useful material has meant either mastering sophisticated search-engine techniques or simply surfing through loads of junk. "What [agents] are trying to do," Lieberman adds, "is find a middle ground between those two."

Indeed, the hunt for the ultimate agent has provoked a minor feeding frenzy in the tech sector. In August, on-line bookstore Amazon bought Junglee, a company that has pioneered intelligent-agent software for helping people comparison-shop on the Net. In September, search-engine company Inktomi picked up C2B Technologies, makers of similar comparison-shopping tools.

Absent the hype, though, the question remains: What impact can agents have on the daily life of the "end-user" (the computer industry's ever-present, willfully perverse phrase for "customer")? Just how useful are these things?

Partly, it depends on how "intelligent" the agent attempts to be. To wit: The simpler the agent's task, the more likely it is to pull it off correctly.

ILLUSTRATION LAMBERTO ALVAREZ

Your Special Agents

NEWSTRACKER (nt.excite.com): Choose personalized topics; NewsTracker will monitor more than 300 news sources every day to find matching stories.

ALEXA (www.alexa.com): This freeware runs alongside your browser, tracking your surfing habits and recommending new sites to visit.

NETMIND (www.netmind.com): Monitors any Web site you choose, notifying you when its contents change.

MYSIMON (www.mysimon.com): Pick the item you're looking for, then have MySimon hunt for deals at on-line stores.

PRICELINE (www.priceline.com): Pick the city you want to fly to and the price you're willing to pay; PriceLine notifies you when it finds a match. Does the same for hotels, car purchases, and—whoa—mortgages.

One good example of this is NewsTracker, a free service of the search-engine company Excite (nt.excite.com). Users pick a topic, as narrow or broad as they want, and NewsTracker monitors more than 300 different on-line news sources all day long, bringing back articles that match the criteria. Here, the agent isn't much more than an automated search engine, so it's difficult for it to screw up. I used it last fall to track the slow-motion train wreck of the federal Conservative leadership vote, and was delivered almost no off-target stories. Netizens are currently using it to track more than one million custom topics; another five million users every day are surfing NewsTracker's own preset topics. "One of the biggest uses is businesspeople tracking what their competition is up to," says Kris Carpenter, Excite's director of search services.

As agents get more complex, they can go beyond merely fetching material for which you ask. Instead, they make unnervingly good predictions about where you'd like to go today. Some of these more sophisticated agents—such as MyLaunch's music site and the book-recommendation service at Barnes and Noble's on-line bookstore (www.barnesandnoble.com)—use "collaborative filtering." Collaborative filtering works by a type of mob rule. The software tracks users' choices, and extrapolates common threads in those choices to you. "It sort of goes, 'Other people who like A also like B—so if you like A, maybe you'll like B too,'" says Jim Hughes, general manager of MyLaunch.

As the agent gets more predictive, though, it can also overreach itself, going bizarrely astray. I told Barnes and Noble that I liked the true-life thriller *The Perfect Storm*; it suggested I read *NT: A Strategic Review*, a technical manual about Windows NT. (There may be a very deep, intentional irony here, but I doubt it.) As critics point out, collaborative filtering only produces accurate predictions when there's broad consensus on popular things. Once you hit marginal information, things fall apart.

Which is really the biggest problem with agents. Consider: Marginal information—the stuff you stumble upon by happy accident—is usually the best stuff. We most often discover the useful tidbits when we're least looking for them. We're reading one story in a newspaper when we see, out of the corner of our eyes, a stray notice about an issue or event we've never heard of. This is the essence of true browsing, a dying art form both off- and on-line. When you look at it this way, the problem with agents isn't that they produce weird results. It's that they aren't weird *enough*—they're unlikely to tell us something that we didn't know we needed to know.

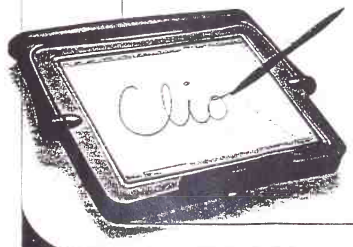
Sure, the signal-to-noise ratio on the Internet truly gnaws. But what about when the noise is more useful than the signal? When we finally get an agent that can actually mimic the complex, contradictory ways that we truly find our news, it'll be more than just "intelligent"—it'll be "civilized." ●

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THE SAW-OFF

Portable computing suffers from two extremes: You're stuck with either a laptop too heavy to really be "portable" or a palmtop too tiny to be of any use. Vadem's new Clio goes halfway down the middle—you can enter data using its relatively full-size keyboard, or write directly on the screen using handwriting recognition. Running Windows CE, it handles most document types and surfs the Net, complete with a built-in 33.6 modem. Best of all, the flip-up screen rotates a fluid 360 degrees, making data-crunching in economy-class airplane seats vaguely comfortable. Battery time: theoretically 12 hours (www.vadem.com; tel: (408) 467-2100; $999 U.S.).





VAPORIZING WARE

Just so you know, when you drag that document onto the trash on your computer, it doesn't necessarily vanish. The data sit inert on your hard drive—sometimes for years—so that anyone with a subpoena and a data-recovery program can bring them back to life. So if you really, really want to make sure those embarrassing little memos ("My Supervisor Hate File," "301 Dead Baby Jokes," "Crush Netscape, signed Bill G.", and so on) are truly gone, get a copy of Shiva, Destroyer of Files, by Isis Software. It writes over deleted files with random junk data, making them unrecoverable. A favourite of hackers. Windows only (www.isis-software.com, $19.95).

CONTINUED FROM PAGE 38 relationship with characters," says Maya. "For characters, interactivity was key."

To date, Togglethis has developed the animation and characters, syndicated the advertising deals and developed the platform. But the shop is working with ad agencies, television networks and other programmers so that in the future the Net world beyond their Flatiron offices will create programming using Togglethis as a client-based platform.

"In the beginning, we had a vision of what interactive entertainment should be," says Maya, president and CTO. Maya wanted something more like television than static Web pages – but not content passively pushed at consumers. Instead, he longed for anthropomorphic things – images of people, cartoons, whatever – with which surfers could shake hands. That's what the Togglethis platform creates.

Even in 1996, the Togglethis pair knew that the Web page wasn't the ultimate way to deliver Internet content.

The key breakthroughs came in three areas. First, Maya and Singer decided to "divorce the character assets" like art and music from instructions for individual interactive episodes. In other words, once you download Xippy's 2.5MB file of art and music, you don't need to download it with every episode. Instead, a tiny e-mail arrives each week with text instructions attached. Click on the icon at the bottom of the e-mail and the attached instructions make the cartoon come to life.

Then, in 1996, when most people were experimenting with Web-based applications and proprietary client-server schemes for pushing content to consumers, Maya and Singer decided to build their product around e-mail. They were convinced that delivering content – instead of forcing people to come and get it – was a good idea.

But what passed for "push" in 1996 was not smart, the pair thought. E-mail was not sexy technology, but it was fast and ubiquitous. Once surfers download the art for a character, the instructions for each individual episode can be delivered via e-mail – no clunky clients, no forcing surfers to visit your Web site. Even in 1996, the pair knew that the Web page wasn't the be-all and end-all for the delivery of Internet content.

It took a while for the idea to find a market. Although the company launched with a proof-of-concept animated title, Bozlo Beaver, which includes an integrated ad campaign featuring the Intel bunny people, few corporate clients raced to sign up. But eventually the company cut deals with Warner Brothers Online to distribute new episodes of Bozlo. Corporate deals with movie studios were next – New Line Cinema and Disney used Togglethis to create episodic promotions for *Lost in Space* and *Mulan*.

Now, as part of a deal with Lycos, Togglethis will create a "channel" on the portal so users can access a range of toggled programs. And Togglethis is creating a toggled version of an undisclosed live video celebrity, not an animated character.

The idea is to get out of being the company that produces the shows and to become the company that provides the medium, working hand in hand with content creators to invent a media platform for the future. Although Togglethis was conceived of as a way to deliver ad-supported multimedia programming, Togglethis intends to leave the character and episode creation to more traditional content developers.

The company has a traditional schedule for upgrading its platform software – new versions every 18 months. A new iteration of the software is in development and the company is working to include streaming audio, 3D animation, VRML and delivery through devices like PDAs.

Ah, but what about the financials? The company has been privately funded by friends and family. The partners won't say what kind of money the company's paying deals have generated. For example, New Line Cinema had Togglethis create a movie promotion for *Lost in Space*, in which the *Lost in Space* robot stars in a series of Togglethis cartoons. To date, deals like this, in which Togglethis creates campaigns using its own technology, represent the firm's principal source of revenue. But Singer and Maya expect ad agencies and Web publishers to license the software to create their own Togglethis-based programming. The pair expect to make the lion's share of their money from such licensing fees. ■

Redefining the Internet Experience

COMET SYSTEMS	NEOPLANET	TOGGLETHIS
www.cometsystems.com	www.neoplanet.com	www.togglethis.com
180 Maiden Lane, 20th Floor New York, N.Y. 10038	1841 Broadway New York, N.Y. 10023	151 West 25th St., 3rd Floor New York, N.Y. 10001
YEAR FOUNDED: 1998	YEAR FOUNDED: 1998	YEAR FOUNDED: 1996
EMPLOYEES: 31	EMPLOYEES: N/A	EMPLOYEES: N/A
STRATEGIC PARTNERS/CLIENTS: Lycos, FortuneCity.com, Comedy Central, Tucows	STRATEGIC PARTNERS/CLIENTS: Snap, Bigfoot, Amazon.com	STRATEGIC PARTNERS: Warner Brothers Online, United Press Syndicate, Lycos
FUNDING: Prospect Street Ventures, $2.5 million (first round)	FUNDING: Bigfoot (incubator); Vulcan Internet Venture Fund, amount undisclosed (first round)	FUNDING: Undisclosed private financing
KEY EXECUTIVES: Dean Margolies, CEO, cofounder; Jamie Rosen and Tom Schmitter, cofounders	KEY EXECUTIVES: Drew Cohen, CEO; Warren Adelman, executive VP	KEY EXECUTIVES: Paul Maya, cofounder, president, CTO; Marc Singer, cofounder

Code and Content's Cautionary Tale

AirMedia developed a way to deliver content outside the Web. But then access got cheap and the market disappeared.

Silicon Alley is no stranger to corporate attempts to merge the worlds of code and content. Despite the potential, it hasn't always worked out well for the pioneers. Witness the tale of David Rose and AirMedia Live.

Three years ago, Rose thought there might be a better way to bring high-quality news, sports, weather and entertainment from the Internet to PC desktops. His company, AirMedia, developed a software package that enabled users to download streamed content onto a proprietary desktop interface using a pyramid-shaped wireless receiver.

The AirMedia Live system was aimed at media companies, who were looking to find better ways to get their Internet-based content (and advertising) to users. AirMedia would use its software to create a new kind of digital network and reap the benefits accordingly.

Rose's ambitious, failed attempt to build a media platform on the back of a new technology provides a cautionary counterpoint to the grand dreams of the entrepreneurs at Comet Systems, Togglethis and NeoPlanet.

The scion of one of New York's great family real-estate dynasties, Rose was prescient about the relationship between code and content in the digital telecommunications universe. He founded the company 10 years ago with early mobile messaging systems.

Eventually Rose managed to build a thriving business supplying client- and server-side software for computer messaging via pager networks. In 1992, Motorola selected AirMedia to develop Advise, the first consumer alphanumeric paging software. Today AirMedia's Notify Group remains the largest provider of such services to the PCS and pager-messaging networks of clients like GTE, MCI and Sprint PCS, with annual revenue of $4 million to $5 million, paid through a mix of flat fees and per-user fees.

In 1995, Rose decided to make a broad consumer content play. AirMedia applied for a patent on a system for delivering news and information, as well as e-mail notifications and other messages, directly to PC desktops that weren't logged onto the Net. The messages would go through a proprietary hardware device that received messages over pager networks. AirMedia would license the hardware technology to modem makers, get the pyramid-shaped receivers bundled with new PCs and then sell a range of messaging-update services to consumers.



David Rose, CEO of AirMedia.

AirMedia cut deals with blue-chip media companies that gave those companies the opportunity to deliver branded news and information updates to the desktops of people plugged into the AirMedia Live service. And the company found several modem manufacturers willing to make and market AirMedia receivers.

Unfortunately, between conception and market rollout, the potential market for AirMedia Live evaporated. The product was developed when online services and ISPs charged their customers by the hour for access. But the model changed, and $19.95 all-you-could-eat pricing became the norm. The AirMedia package hit the junk heap. Rose was forced to close his West Coast office, lay off staffers and rethink the efficacy of building a business focused on both code and content.

Rose has successfully retrenched, finding new niche markets for his technology in the burgeoning field of delivering content wirelessly to devices like personal digital assistants.

"Originally, the thought was that content was king and the Internet was this wonderful way of publishing that content – but it didn't work out that way," says Rose. Nowadays, Net content is all about utility; whether traditional content providers like it or not, both a person selling a baseball-card collection on eBay and a GeoCities publisher erecting a *Star Trek* fan site are creating meaningful Internet content.

But AirMedia is focusing once again on the plumbing. Although Rose has tried to find niche markets for AirMedia services (like building a wireless computer information network for physicians and pharmacists, sponsored by the National Wholesale Druggists' Association Service), Rose again sees the upside in the pipes, not the content.

With wireless devices ranging from cell phones to pagers to PDAs all using multiple incompatible formats, the market for a wireless mix of code and content may be returning. Rose believes the software and system architecture he built for the AirMedia network can be put to use as a sort of wireless messaging Rosetta stone – a central hub for the transmission of data to and from myriad devices.

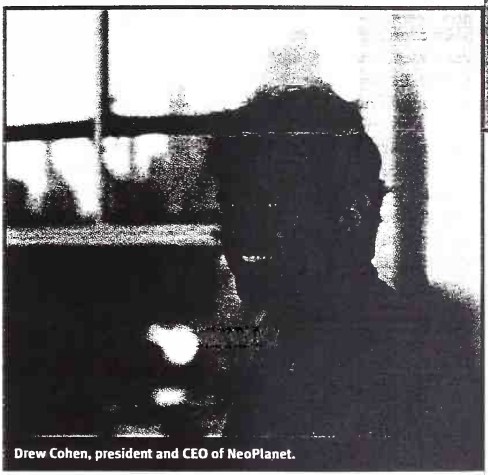
It's not a direct content play like his original AirMedia Live package, but it's creating a path to be used by content providers – a system that will process a message, intelligently know whether the message is going to an 80-character pager or a 500-character text device or both, and then process and send the message.

"Nobody wants to do that yucky work in the middle, that really shanky area of getting this stuff out of one format and into another," Rose says. – *J.C. and T.W.*

CONTINUED FROM PAGE 35 that includes embedded links to SonicNet, CDnow and Bobdylan.com. You can download a channel with preselected links or create your own. An ISP or a media company could design a version to embed navigational links in a branded browser. NeoPlanet could then sell advertising and e-commerce opportunities in the browser shell itself.

The initial NeoPlanet screen takes up most of the desktop. Down the right side is a set of topics or channels – the usual mix of sports, news, finance and entertainment headings. Users can edit the entire array, with the exception of "Shopping," which remains at the top because of NeoPlanet's e-commerce relationships. The arrangement works well for people who regularly use the same large group of sites; it's an improvement on both the bookmark and channel metaphors of the major browsers. NeoPlanet also creates a new space for advertising, a square box in the bottom right-hand corner through which the company streams animated advertising.

"It's not an old-media model, but it's a good model, an integrated model," says Drew Cohen, president and CEO of NeoPlanet. And then, to make sure he's understood, he adds, "Like Yahoo." Cohen's company is based on software, but it operates like a media company. It's an idea based on portals' early success in attracting and keeping users.



Drew Cohen, president and CEO of NeoPlanet.

NeoPlanet was born in the stifling midtown offices of BigFoot, a Silicon Alley company that makes e-mail products and publishes a popular online directory. BigFoot was founded by Lenny Barshack and Jim Hoffman in 1995, and NeoPlanet grew from the work of a group of developers inside the company. With funding from Network Associates' Vulcan Internet Venture Fund of Santa Clara, Calif., NeoPlanet was spun off from BigFoot.

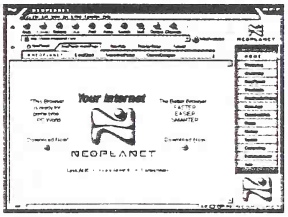
"It came out of a group of people here looking at ways to make the browsing experience fun again, and now we're spinning it out as a separate company," says Warren Adelman, NeoPlanet's senior VP of business development.

While Netscape and Microsoft continue to go down the road of so-called "smart browsing," offering a modicum of intuition to a program originally designed for academic research, NeoPlanet has created what Adelman calls "bookmarks on steroids."

The underlying code of the NeoPlanet shell enables site developers to quickly build their own NeoPlanet browsers by designing different schemes. The company offers several looks for its browser, with names like Boink, Blue Digital, Implant, Tumbleweed and Splat – all with colors and graphics to match. But early users quickly got into the code and experimented with creating their own themes, and now the company is planning to release a toolkit to feed developer momentum.

Its scheme design is important to NeoPlanet because it has what every portal out there wants: stickiness. Web developers who take the time to develop a unique NeoPlanet look and feel are likely to use the product; consumers who create and tweak the navigation system are likely to use it every day. At least that's what the early numbers show. According to Cohen, a former director of content technologies at Intel, early users are spending an average of 130 minutes a day with NeoPlanet, as opposed to eight minutes a day with Yahoo.

"It's not an old-media model, but it's a good model," says NeoPlanet's Cohen. "Like Yahoo."



Of course, that statistic is a bit misleading because NeoPlanet isn't a Web site like Yahoo. It's a desktop client that surfers presumably use for their entire Web session. And its community of users is still small: There have been 100,000 downloads of the 2MB client, and the company says 30,000 people use it every day. The software features a tracking system that enables NeoPlanet to serve custom content – based on a person's surfing patterns – but only if they opt in for the feature. Sixty percent say yes to the tracking, says Cohen, who emphasized that the company is cautious when it comes to privacy.

The company plans to give NeoPlanet away to both individuals and media companies indefinitely. The emphasis is on gaining partners, appealing to early adopters and building distribution. Its first big-ticket partner is Snap, the nascent NBC-CNET portal site. A customized Snap homepage is the default setting for the NeoPlanet client. The firm has also integrated a related links section from Alexa in its newest version. And NeoPlanet has deals with more than 50 ISPs to distribute CONTINUED ON PAGE 38

CONTINUED FROM PAGE 36 branded versions of its product.

So what's the revenue model? Right now, it's advertising and e-commerce affiliate fees. NeoPlanet's first ad in its corner ad screen is for Amazon.com, and the company believes that users will like the nonintrusive style of pushing ads. Cohen says NeoPlanet aims to release two new versions in 1999 and market the program aggressively. The company also plans a study on the effectiveness of the browser as a marketing tool. But the big plan goes into effect further down the line, when and if the company achieves massive distribution; then, argues, Cohen, the company can charge e-commerce tenants for carriage, along the lines of America Online and Yahoo. That's why the home-run deal in the near term may be with another major portal or media company.

"The focus has to be on distribution," says Cohen. "With some e-commerce deals in place, the revenues scale with distribution. But in the long term, what we're selling is some of the most valuable real estate on the Net."

Bats on Your Desktop



XIPPY, A GOOFY GRINNING BAT, IS THE LATEST creation of Togglethis, a 3-year-old Silicon Alley start-up that developed a patent-pending system for delivering animated, fully interactive, character-based entertainment to the desktop. Xippy was born out of a deal between Togglethis and United Press Syndicate, which syndicates "News of the Weird," a newspaper column that draws attention to bizarre nationwide news items. Lycos has just signed a licensing deal with Togglethis covering the exploits of Xippy and other animated Togglethis-enabled characters. And each episode of Xippy includes a fully animated interactive ad from AT&T.

Every week, subscribers get a new episode via e-mail. A typical episode begins when Xippy flies across your screen and lands on your desktop. He's accompanied by theme music, and he asks you to write headlines for the story about a man marrying a comatose woman because her dog told him to do it, for example. As you rewrite Xippy's headlines, he reacts, often petulantly, to your every amendment.

A quick download and users can view e-mailed episodes – complete with animated, interactive ads.

Perhaps even more compelling is the AT&T ad that closes the episode, featuring an Albert Einstein look-alike frustrated because all his phones are ringing at once and he has no management system for handling the traffic. Up pops the AT&T logo and sound bite. It's the kind of advertising marketers have been missing on the Internet – a narrative ad that engages the viewer.

OK, so you're playing with an animated, interactive bat. You say to yourself, "I've seen a lot of things, but this is ridiculous." Maybe you think, "God! This is the most annoying thing I've ever seen." Or maybe you think, "Look, it's so cute. I can pick it up with my cursor and hang it upside down and drop it on its head." But the one thing you don't think is, "Wow, what a triumph of technology." That's just the way the creators of Xippy Malone, Cub Reporter like it.

It's an elegant piece of work. With a 2.5MB download, surfers get the art and engine for what Togglethis calls a "toggled character" – one that receives e-mail instructions for weekly episodes and lets you interact with it in a number of ways. Togglethis has already created episodic programming not just for Xippy but for other characters, including Mushu from Disney's animated epic *Mulan*. Each week's episode arrives in the form of a set of plain-text e-mail instructions that the toggle engine uses to generate each episode. You don't have to stay



Paul Maya (left) and Marc Singer, Togglethis founders. Xippy is to the left.

online to view the episode, and it's got nothing to do with the Web (except you can sign up for various characters at Web sites like Disney). And the programming client for creating new instructions uses a simple drag-and-drop interface that doesn't require programming knowledge to create new episodes.

Togglethis cofounders Marc Singer and Paul Maya envision Togglethis as a platform for delivering advertising-supported interactive entertainment that breaks out of the Web page. Toggled characters like Xippy or the robot from *Lost in Space* walk and dance along the toolbar on the bottom of the screen and fly off its edges whether a browser is open or not.

Maya met Singer when the pair was working at a division of Times Mirror that develops software for producing CD-ROMs. They watched as CD-ROMs failed to find a market and as first-generation Internet content developers became enmeshed in the linear, pagelike aspects of first-generation HTML. They knew that they didn't want to build a platform for that kind of future. "We had, for the first time, an opportunity to create an interactive CONTINUED ON PAGE 40

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Bacon's

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Alexa browser plug-in offers site info, services

By SCOTT A. MAY
Special to the Tribune

If you're Internet savvy at all, you already know about Web browser plug-ins, like ShockWave and RealAudio. Plug-ins are primarily multimedia browser enhancements, adding effects like animated graphics and sound to Web sites that support them.



PC INFO

Now there's a new wave of Web accessories on the horizon that could change the way you use and view the Internet. Though less dynamic than multimedia plug-ins, these next-generation browser enhancements will instead concentrate on service and functionality. Mark my words: This stuff is going to be huge.

One of the first products out of the gate is called **Alexa**, a free advertiser-supported Web navigation service. This key word here is "free" — if you don't like Alexa, dump it. But I think most users will love it.

In a nutshell, Alexa plants itself inside your copy of Microsoft Internet Explorer or Netscape Navigator, in the guise of a small toolbar at the bottom of the screen. Toolbar components include links to similar sites, detailed information about the current Web page, and pop-up access to Webster's online dictionary and thesaurus, as well as the Encyclopedia Britannica Online and e-BLAST Internet Guide.

There's only two downsides that I can see. The first is losing about half an inch off the bottom of your browser window, but it's worth the sacrifice. The Alexa toolbar can be toggled on or off, as desired. The second downside is a slight degradation of Internet access speed, because the Alexa toolbar is basically an active browser sub-window, constantly being updated. Although I noticed the drop in speed, it's not enough to trigger frustration. If it does, turn it off until you need it.

Of course, all this free stuff comes at another minor price: ads.

You'll find a tiny banner ad in the far-right side of the toolbar, as well as context-sensitive links. I'd wager that most users rarely even notice. Alexa's creators promise anonymity, as far as advertisers go, claiming that no personal information will ever be sold. All in all, Alexa's advertising is no more intrusive than that of free e-mail services, like Juno or Hotmail.

The area of Web site information is particularly interesting. With a single click, you can find out who owns the site, how large it is, how often it updates, how popular it is, and user ratings.

Another fascinating aspect of Alexa is its Web page archives. Every 30 to 60 days, Alexa takes a "snapshot" of more than 500,000 Web pages. They've been doing this since 1996 and now have more than eight terabytes of Web page snapshots on file. One terabyte equals one million megabytes. And this library is open to everyone. So next time you get the infamous Error 404, which tells you that the page is not found, you can use Alexa to view the last known snapshot of the missing page.

Alexa is also a Web Accessory option in the latest editions of Internet Explorer 5.0 and Navigator 4.5. A Macintosh version has also been announced. Although Alexa works with America Online, it's incompatible with AOL's built-in browser. To use Alexa with AOL, you must log on to the service, but use an external browser to surf the Web.

You can download Alexa for free from its Web site, located at www.alexa.com. Within minutes, the program integrates itself with your browser and you're ready to go. For more information, contact Alexa Interactive at (888) 882-5392.

WIN95/98 TIP OF THE WEEK

If you ever need to talk to someone about hardware or software technical support, it helps to have your system information handy. If you've got a printer, here's how: Right-click on the My Computer icon and select Properties from the context menu. In the System Properties window, click on the Device Manager tab, then the Print button. Now select the "all devices and system summary" button and click OK.

This should produce enough information about your hardware, interrupts, ports, memory usage, devices and drivers to satisfy most tech support needs. Keep this printout on file for future reference, and update it whenever you add or change hardware configurations.

Scott A. May is a local free-lance writer who has been published in Computer Shopper magazine and other computer publications. He owns CompuSoft consulting in Columbia. Send e-mail to smay@trib.net.

The Industry Standard

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Bacon's

FEATURE

NEW MEDIA GETS NEWER

Some small New York firms are combining code and content to open up the Internet experience.

By Jason Chervokas and Tom Watson

Photographs by Girl Ray for *The Standard*

IN THE BATTLE TO CAPTURE THE ATTENTION OF FICKLE WEB surfers, Microsoft, Netscape, America Online and the big portal players would seem to hold all the cards. The browser, after all, defines how Web content is seen and used. Yahoo, Excite and the other portals labor ceaselessly to find new ways to keep customers focused on their sites.

But a group of little-known companies is developing a whole new set of techniques – around, through or even without browsers or portals. Their work is helping to redefine the Internet experience – not on a grand scale, perhaps, but with significant effect. These start-ups are building software packages that piggyback on existing browsers and e-mail clients. The software is designed to take up a fraction of the bandwidth and storage space needed for the Internet suite behemoths made by Netscape and Microsoft.

These firms' products are different. They are technical, but they've been developed as media. Their creators, many of them developers, started with the notion of creating something new in the Internet experience. They asked a number of questions: Would developers want to customize the desktop cursor for specific Web sites? How could people effectively manage numerous bookmarks? Is there a way to tell interactive stories and use characters in the new medium? Is there a way to constantly feed Web content to computers not connected to the Net?

Four of these companies make their homes in New York, taking advantage of their proximity to the world's media elite to distribute their products (and bypassing the old Silicon Valley routes, like getting Microsoft to bundle your software and adopt your standards). For the most part, they don't imagine that consumers will ever pay for their software. Rather, they have built products with the marketing departments of the leading media and Internet publishing companies in mind, and have created what the founders believe will be new pathways for content – and for advertising.

These new companies are the latest sign of maturity in the Internet industry. The potential to develop such specialized code for the Internet wasn't as apparent a few years ago. It seems that Silicon Alley itself is coming of age.

Point-and-Click

THE VIEW FROM THE 20TH FLOOR OF COMET SYSTEM'S DOWNtown office building overlooking New York harbor is vast, a contrast to the tiny 32-pixel piece of digital real estate that has obsessed the start-up since its beginning in 1997. The company is the inventor of the Comet Cursor, software that enables Web-page publishers to change the look and feel of the cursor that browses their sites.

The product itself is simple. If you visit a site that features the Comet Cursor in its design, you'll be prompted to download a tiny 25K plug-in. Thereafter, your cursor changes to whatever shape and style the publisher specifies (it changes back to your garden-variety pointer when you leave the Comet-enabled page). Visit the Tucows online software library, and your cursor becomes (ta-dah!) a two-headed cow. Last Thursday, AT&T's WorldNet started a contest at its Worldnetnow site in which the cursor becomes a coin that can scratch off a lottery-style ticket. At Comedy Central, the cursor really takes off – with tiny *South Park* characters, network logos and the visages of Dr. Katz and Bob and Margaret. It's nifty, unobtrusive and quickly downloadable.

But behind the thin client is a thick marketing plan, based on mass distribution on the Internet, sophisticated user tracking and the hope that eventually media planners will build cursor campaigns into major online advertising buys. "One of the great fallacies of our business is that it is about technology," says Ben Austin, director of marketing for Comet. "We're creating a medium."

The idea is that media companies like NBC and Disney will customize the cursors on their sites and that consumer companies like Sony and Procter & Gamble will want to "own the cursor space" and pay for campaigns that include custom cursors along with Web banners, buttons and content sponsorships in integrated digital campaigns.

The cursor has some tracking capabilities, as well, because each download includes a unique user ID. Eventually, Comet plans to market the cursor software like other media, on a cost-per-thousand basis. The company will be paid as a distributor of advertising and brands through its cursor network, in the same way firms like DoubleClick and 24/7 Media get paid for distributing banners. Half the 30-person Comet staff is devoted to marketing and media.

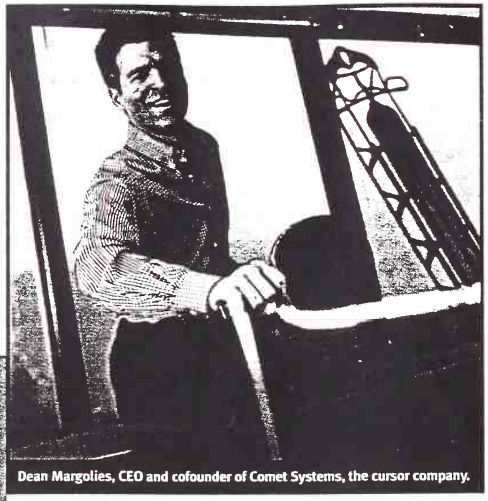
Right now, distribution is everything. Although Comet has no competitors, a major player could jump into cursor development. It has applied for patents to cover its technology. And the company has closed deals with Lycos to build the consumer base (there is a cobranded version called LiveCursor on the Lycos site) and with EarthWeb and other I-Builders to encourage Web builders to use the technology.

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Austin has visited more than two dozen Web shops on both coasts – from big players like Agency.com and iXL to smaller design firms – to educate the interactive services companies about using the cursor for their clients. Comet's New York location helps it with both media planners and Web builders and gives it easy access to the big media companies it hopes to win as customers. "We thought about starting the company out in California," says CEO and cofounder Dean Margolies, "but we decided on New York."

Comet, founded by veteran technology entrepreneur Margolies, former toy inventor Jamie Rosen (who came up with the idea for the cursor) and senior MIT engineer Tom Schmitter, has more than 40 patent applications pending. Valued at about $10 million, the company has received $2.5 million from New York-based Prospect Street Ventures and expects another round of funding in early 1999.

Like most private companies, Comet will not disclose its revenue. But it has no doubt been thin thus far. Site developers who want to use the cursor have options: pay a $1,500-per-month licensing fee, get the cursor in exchange for banner and button advertising, or simply download the code for one of Comet's in-house stock cursors and pop it onto their pages – for free. As advertisers adopt the cursor as part of their banner ads, Comet earns on a cost-per-thousand basis, getting a piece of the increased viewership. A portion of the company's distribution plan revolves around fan-created celebrity and entertainment sites. Comet has sought out developers of sites devoted to Michael Jackson, Madonna and Jennifer Love Hewitt.



Dean Margolies, CEO and cofounder of Comet Systems, the cursor company.

Of course, even the trickiest cursors have limits. Once the excitement wears off, you have to wonder what's next for Comet. Beyond its plan to integrate cursor sales into major media marketing plans, Comet seems designed for the short term. And the short term has been good: The company has counted 10 million plug-in downloads (including more than 2 million registered users) since the product launched last August. The company plans to stay independent for now, though another round of financing could lead to a strategic investment. After all, in a Web marketplace in which differentiation is increasingly important, the Comet cursor might be the right 32 pixels of desktop for a Web media player, which might want to snap up the start-up and its development team rather than start from scratch.

Bookmarks on Steroids

YOUR BOOKMARKS ARE A MESS, AN UNHOLY JUMBLE THAT makes keeping up with important news a nightmare. Hey, no one ever said Web browsing was a user-friendly experience. But NeoPlanet, incubated by New York Web directory company BigFoot, wants to change all that. The payoff for Web surfers is a highly customizable Web browsing shell that lets them change everything about the Web experience. The payoff for NeoPlanet is a new channel for Internet advertising.

The NeoPlanet browser isn't really a browser at all. It's a graphical interface that works with Internet Explorer (the next version will also work with Netscape) to organize your Web browsing. It looks like a browser with editable links embedded in toolbars at the top and side of the browser window. You like music? Build a version of NeoPlanet CONTINUED ON PAGE 36

NS-3365 NEWS SERVICE
REUTERS AMERICA, INC.
New York, NY

FEBRUARY 9, 1999
Bacon's

3485-A

"Targeted advertising" takes on new meaning [illegible]

PALO ALTO, Calif., Feb 8 (Reuters) - Amazon.com would not have much luck hanging an ad in the window of a Barnes & Noble store. But it has managed to place online ads so that they pop up on the computer screen right on top of the Barnes&Noble.com Web site.

British Airways strategically places some of its Internet ads so they can be superimposed on rival airline's Web sites. And the online vitamin store, VitaminShoppe.com, has found a way to get its name right below other e-commerce giants that sell natural food supplements.

Talk about targeted advertising. Internet companies now have a way to advertise right in their competitors' virtual front rooms -- without being accused of trespassing.

The unusual service comes from Alexa Internet (www.alexa.com), a free Web navigation business that has attracted more than 1.5 advertisers including e-commerce heavyweights like Amazon.com and CDNow. Alexa began selling its ads last year.

Alexa is a service that tracks Internet users' surfing patterns to deliver them "smart links" to relevant sites and to display advertising on the pages they visit. People who go to Alexa's Web site to download the service get a second toolbar on their computer screen.

The toolbar delivers advertising on different Web sites, like a company's competitors, the number of online magazines in existence, and financial data. It also delivers ads, and Alexa can target the ads so they only appear when the user is visiting designated Web sites.

Amazon.com, for instance, bought ads to appear [illegible] when users visited certain Barnes&Noble.com pages. But Barnes&Noble.com is no longer [illegible] from Alexa's service. Or [illegible] Alexa's high-tech [illegible].

[illegible] appears at the bottom of the screen. Click that on and [illegible] pops up superimposed on top of the [illegible].

It's as close as you can get to putting an ad on somebody's front door, explains Bruce Gilliat, Chief Operating Officer of Alexa, which has an audience of about 1.5 million Internet users.

Gilliat also says the Alexa toolbar provides a way to get a company name on some of the sites, like the Library of Congress, that do not accept ads. Because the ad is linked to the Alexa toolbar, it is not considered to be actually running on the Web site, even though it appears on the same screen.

[illegible]

Full Text Article

INQUISIT

Click here to jump to the first keyword your agent found.

'Targeted Advertising' Takes On New Meaning Online

(Reuters - 02/10/99)

PALO ALTO, Calif. (Reuters) - Amazon.com would not have much luck hanging an ad in the window of a Barnes & Noble store. But it has managed to place online ads so that they pop up on the computer screen right on top of the barnesandnoble.com Web site.

British Airways strategically places some of its Internet ads so they can be superimposed on rival airline's Web sites. And the online vitamin store, VitaminShoppe.com, has found a way to get its name right below other e-commerce pages that sell natural food supplements.

Talk about targeted advertising. Internet retailers now have a way to advertise right on their competitors' virtual store fronts -- without being accused of trespassing.

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The toolbar delivers statistics on different Web sites, like a company's address, the number of online visitors it receives and financial data. It also delivers ads, and Alexa can target the ads so they only appear when the user is visiting designated Web sites.

Amazon.com, for instance, bought ads to appear by a list of other book-related sites, like barnesandnoble.com, the U.S. Library of Congress and various campus bookstores. So when an Alexa customer logs onto barnesandnoble.com, a small ad for Amazon appears at the bottom of the screen. Click that ad and it becomes quite big, superimposed on top of the barnesandnoble page.

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[Reuters Technology - 02/... ...]

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Alexa

Article 1 of 7

FISCAL 2000 LEGISLATIVE APPROPRIATIONS

JAMES H. BILLINGTON

02/10/99
Congressional Testimony by Federal Document Clearing House
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Statement of James H. Billington The Librarian of Congress before the Subcommittee on Legislative Appropriations Committee on Appropriations U.S. House of Representatives Fiscal 2000 Budget Request

February 10, 1999

Fiscal year 2000 is a milestone year for the Library of Congress -- a Year of Great Celebration and Transition. On April 24, 2000, the Library will be 200 years old, the oldest Federal cultural institution in the country. By creating and sustaining the world's largest and most diverse collection of knowledge and mandating it to serve other libraries and the nation, the Congress of the United States has been quite simply the greatest patron of libraries in history.

The Congress has continued to support the Library's traditional services as well as its new leadership role in delivering free electronic information to the nation. The Library's Internet site now receives more than three million electronic transactions every working day. This phenomenal usage nearly doubles that of the previous year.

The Library's mission is to make its resources available and useful to the Congress and the American people and to sustain and preserve a universal collection of knowledge and creativity. To fulfill this mission, the Library has amassed an unparalleled collection of more than 1 1 5 million items, a superbly knowledgeable staff, and cost-effective networks for gathering the world's knowledge for the nation's good.

People and institutions in the information world are facing historic challenges. The world of librarians and libraries is rapidly changing, and the Library of Congress is both leading and embracing change to sustain its role as a trusted knowledge navigator and pathfinder for America's unique system of providing free Public access to usable information. We are making the transition from a model of receiving, Processing, and serving primarily artifactual materials (e.g., Paper books and serials, films and tapes) to a model of also receiving, processing, and serving the rapidly increasing number of materials available only in digital form (see attachment #1). We are also making the transition from a model of primarily serving people over age 18 who use our collections in our reading rooms in Washington, D.C., to a model of serving people electronically everywhere, regardless of age -- and contributing directly to K-12 education with the American Memory/National Digital Library program. (Attachment available on hard copy only).

The Bicentennial of the Library in fiscal year 2000 will be a decisive time for developing integrated automated systems and for initiating staff succession programs to sustain and enhance the Library's critical role as a trusted knowledge navigator for the Congress and the nation. The Library's proposed fiscal year 2000 budget supports the Library's mission and strategic plan, which charts our course into an increasingly electronic future. Libraries are a link in the human chain that connects what happened yesterday with what might take place tomorrow; they are the base camps for new discovery in the Information Age; they must include and integrate both traditional and digitized materials.

The Library's budget request totals $383.7 million in net appropriations and $33.1 million in authority to use receipts -- a net increase of 5.5 percent ($20 million) over fiscal 1999. Most of this increase ($16-6 million) is needed simply to fund mandatory pay raises (driven largely by the January 2000 pay raise of 4.4 percent) and unavoidable price-level increases; $3.4 million (of the $20 million total increase) is needed to meet critical growing workload increases (net of program decreases).

Growing workload decreases total $8.25 million, including a $4.8 million decrease resulting from higher copyright fee receipts, a $2.25 million decrease resulting from two no-year projects (i.e., Meeting of the Frontiers and Lewis and Clark Bicentennial) that were funded in fiscal 1999, and a $1.2 million decrease resulting from a planned reduction in the Integrated Library System project costs.

Growing workload increases totaling $11.6 million are offset by the decreases of $8.25 million which result in a net increase of $3.4 million. Major increases include: $4.8 million for automation building blocks; $1.6 million for a staff succession program; $1.4 million for improved collections security; $.7 million for the Copyright registration process (funded by receipts); $.7 million for the Law Library; $1.5 million for a multi-year James Madison building workstation modernization project; and $.3 million for operational funding of the National Audio-visual Conservation Center.

-Early History-

The Library of Congress is a living monument to the remarkable wisdom of the Founding Fathers who saw access to an ever-expanding body of knowledge as essential to a dynamic democracy. The Library's three buildings are named for Thomas Jefferson, John Adams, and James Madison. With the support of these Presidents, the Congress established the Library in 1800 as soon as it moved to the new capital city of Washington and established the Joint Committee on the Library as the first Joint Committee of the Congress in 1802.

Jefferson, in particular, took a keen interest in the new institution. After the British burned the Capitol and the Library during the War of 1812, Congress accepted Jefferson's offer to "recommence" the Library and purchase his multi-lingual 6,487-volume collection (then the finest in America) at a price of $23,950. It contained volumes in many languages on everything from architecture to geography and the sciences. Anticipating the argument that his collection might seem too wide-ranging for Congress, Jefferson said that there was "no subject to which a Member of Congress might not have occasion to refer."

Jefferson's ideals of a "universal" collection and of sharing knowledge as widely as possible still guide the Library. With Congressional blessing and support, the Library has grown,to serve the Congress and the nation more broadly in ways that no other library has ever done -- largely as a result of four milestone laws: (1) the copyright law of 1870, which stipulated that two copies of every book, pamphlet, map, print, photograph, and piece of music registered for copyright in the United States be deposited in the Library; (2) the 1886 authorization of the first separate Library of Congress building that contained openly accessible reading rooms and exhibition space for the general public; (3) the 1902 law that authorized the Library to sell its cataloging records inexpensively to the nation's libraries and thus massively help to subsidize the entire American library system; and (4) the law in 1931 that established the program in the Library to create and supply free library materials to blind and physically handicapped readers throughout the country. Congress thus established the basis both for the continued growth of the collections and for the extension of the Library's services to citizens everywhere. In 1914, Congress created the Legislative Reference Service (LRS) as a separate entity within the Library of Congress to provide specialized services to "Congress and committees and Members thereof." In 1946, the Congress granted LRS further statutory status within the Library and directed it to employ specialists to cover broad subject areas. Congress renamed the LRS the Congressional Research Service (CRS) in 1970 and enhanced its analytical capabilities by defining its policy role for the Congress and emphasizing research support to the committees of Congress.

More recently, a series of Congressional statutes have created within the Library of Congress the American Folklife Center (1976), the American Television and Radio Archives (1976), the national Center for the Book (1977), the National Film Preservation Board (1988), and the National Film Preservation Foundation (1996) -- further extending the Library of Congress' national role.

-The Library of Congress Today -

The core of the Library is its incomparable collections -- and the specialists who interpret and share them. The Library's 115 million items cover more than 530 miles of shelf space and include almost all media through which knowledge and creativity are preserved and communicated.

The Library has more than 27 million volumes, including 5,700 volumes printed before the year 1500; 112 million photographs; 4 million maps, old and new; 2 million audio recordings; 800,000 motion pictures, including the earliest movies ever made; 4 million pieces of music; 50 million pages of personal papers and manuscripts, including those of 23 Presidents of the United States as well as hundreds of thousands of scientific and government documents.

New treasures are added each year. Recent acquisitions, to name a few, include: papers of Supreme Court Justice Ruth Bader Ginsburg covering her career before appointment to the Court; an addition of 2,000 items to the papers of Supreme Court Justice William J. Brennan; a collection of 500,000 items of Pamela Harriman, diplomat and political figure; the Martha Graham Archives, documenting the contribution of this pioneer in American dance; 32,000 papers of poet Edna St. Vincent Millay; additional organizational papers to collections already at the Library of the National Urban League and NAACP National and Washington Bureau; a large addition to the papers of architect I.M. Pei; sixty drawings of Pat Oliphant, the political cartoonist; text, images, and audio files representing a full "snapshot" of the public World Wide Web (some 500,000 Websites) donated by **Brewster Kahle** , President and Founder of **Alexa Internet** ; three rare portraits of Georgia O'Keeffe by master photographer Alfred Stieglitz; and a Map of Philadelphia from 1752 with the first illustration of Independence Hall.

Every workday the Library's staff adds approximately 10,000 new items to the collections, after organizing and cataloging them, and finds ways to share them with the Congress and the nation -- through on-line access across the nation, through in-person access in the Library's reading rooms, and through cultural programs that feature the Library's collections and reach across the country.

Major annual services include delivering more than 530,000 congressional research responses and services, processing more than 640,000 copyright claims, cataloging nearly 300,000 books and serials, and circulating more than 22 million audio and braille books and magazines to blind and physically handicapped individuals all across America. The Library also provides free on-line access, via the Internet, to its automated information files, which contain more than 75 million records -- to Congressional offices, Federal agencies, libraries, and the public. The Library of Congress programs and activities are funded by four salaries and expenses (S&E) appropriations, which support congressional services, national library services, copyright administration, library services to blind and physically handicapped people, and management support. A separate appropriation funds furniture and furnishings.

- Automation Building Blocks -

The Library is putting in place automation building blocks that will ensure a solid foundation for continuing into the next century its historic leadership role of delivering information services to the Congress and the Nation, setting bibliographic standards (saving libraries hundreds of millions of dollars by supplying them with bibliographic data), and providing free electronic access to knowledge and information for life-long learners everywhere.

Key automation building blocks for the future include:

- Integrated Library System (ILS) - The ILS is scheduled to be operational at the beginning of fiscal year 2000 and will change the work patterns for more than half the Library's staff. The fiscal year 2000 budget incorporates a planned decrease of $1,197,000 (from $3,544,000 to $2,347,000), which is $270,000 less of a decrease than projected two years ago in the original budget because of higher software maintenance costs. The ILS will coordinate and make more efficient all the Library's basic functions, such as acquisitions, cataloging, and research and loan services but will require a major redirection of resources to implement. As a result, the Library projects a slight short-term increase in its arrearage during fiscal years 1999 and 2000. The Library expects that any major savings from the ILS would begin to accrue at the end of fiscal year 2000 and begin appearing in the Library's fiscal-year 2001 budget.

- Electronic Resources Information Project - An important phase of the transition to an increasingly electronic future is the development of an approach to handling digital materials. The Library is requesting a fiscal 2000 increase of $964,764 for an initiative that consists of two parts: (1) a three-year project, at $520,836 per year, to develop and implement policies and procedures and the access management system necessary for incorporating into its collections and services the electronic products the Library acquires from others via copyright deposit, gift and purchase, and (2) a permanent base increase of $443,928 to fund the technical staff necessary to support the handling of electronic services in the custodial divisions.

Just as the National Digital Library Program provided national leadership for the transition to a digital environment through conversion of archival materials delivered on the Internet, the Electronic Resources Information Project will provide leadership in the integration of material in electronic form into our traditional operations with books and other hard copy materials. This effort is a necessary initial step and a key part of the comprehensive plan for integrating all digital collections.

- Global Legal Information Network (GLIN) - GLIN is a cooperative international network in which nations are contributing electronically the full, authentic text of statutes and regulations to a database hosted by the Law Library of Congress. GLIN is the digital future of the Law Library, and an increase of $396,000 is requested to support GLIN's expanding from 12 to approximately 30 countries by the year 2004: an addition of three to four countries per year. The Library plans to use receipts provided by participants and sponsors of GLIN to help support GLIN development, but these receipts will not be sufficient to ensure success until a critical mass of countries is achieved.

- Copyright Office Electronic Registration, Recordation and Deposit System (CORDS) - CORDS is the electronic future of the Copyright Office and provides the public with an electronic means to submit copyright claims and documents which streamline internal processing. Development, as well as testing, will continue through successive phases with an increasing number of electronic registrations over the Internet. In the year 2004, the Library expects to receive at least 100,000 works (out of a total of more than 700,000 works) in digital form -- such as census data, films, music, encyclopedias, scientific papers, and legal documents. An increase of $143,988 (funded by receipts) is requested to expand the CORDS system into new formats, provide on-line customer support, support increasing digital storage needs, and enhance technical capabilities.

- Automation Infrastructure Support - An increase of $3,250,000 is requested to fund automation infrastructure support item: (1) $1.9 million to upgrade the Library's digital voice switch, which has been in operation for more than a decade and will not be able to support the Library's growing telecommunications requirements in the 21st century- (2) $600,000 to increase computer server storage and capacity, which is necessary to meet the growing demand of the millions of transactions processed daily; (3) $500,000 to fund additional security and disaster recovery measures, which are becoming increasingly critical with the growth of online systems; and (4) $250,000 to support the first phase of a central financial management system replacement project. The Library is undertaking an institution-wide planning effort to coordinate these building blocks and other digital initiatives in order to provide the most effective information services for the 21st century. The Library is also seeking advice and counsel from the National Academy of Sciences as part of our planning process. Reengineering traditional functions and adding digital content are critical elements of the planning (see attachment #2). The overall transition to modern electronic services Library-wide will be a multi-phase, multi-year process (see attachment #3). (Attachment available on hard copy only).

Fiscal year 2000 marks the end of the initial five-year National Digital Library (NDL) program, and the Library will present, in next years budget, its plans for the future of our digital programs. The highly successful NDL program serves as a catalyst for institutional change, in addition to making possible access by millions of Americans to the Library's vast holdings. A recent PC Magazine review of the Top 100 Websites stated: "We've raved about The Library of Congress for years, and it just keeps getting better." We plan to build on our successful five-year NDL program to ensure public availability of additional high-quality content.

With regard to the Library's Year 2000 (Y2K) readiness for automated operations, the Library has identified 99 mission critical systems and is on-schedule for making these systems Y2K compliant by September 30, 1999 (see attachment *4). The General Accounting Office conducts regular reviews of our progress in reaching Y2K compliant automated operations and reports quarterly to the Congress on our progress. (Attachment is available on hard copy only).

-Succession Program-

The Library's ability to serve Congress and the nation depends in large part on its expert staff, particularly those who have intimate familiarity with the special collections or fluency in foreign languages. In 1996, Library Services undertook an analysis of its vulnerability to retirements and determined that by fiscal year 2004 50 percent (1077) of its staff would be eligible for retirement. An additional concern is the need to provide upward mobility opportunities for motivated technicians who have demonstrated their ability to move into professional positions. To respond simultaneously to both of these needs, the Library requests $568,134 to initiate a cost-effective Library Services Career Enhancement and Succession Plan that will give existing staff opportunities to advance to critical professional positions while also enabling the Library to recruit a new corps of junior technicians. Without the additional funding for technician positions, our newly promoted (and higher paid) curators will be forced to devote time to technician-level assignments, which would not be a cost-effective use of resources.

The Congressional Research Service faces a similar challenge. One-half of CRS' staff of analysts, attorneys and reference librarians will be eligible to retire by the year 2006. To address this challenge, CRS began a research capacity risk assessment process in 1996 and identified the specific subject areas where staff were likely to retire in the next few years. CRS foresees reduced analytic capacity in a significant number of subject areas as early as the year 2000- these losses will accelerate and affect almost every area of legislative support to the Congress by 2004. Rebuilding this capacity requires a multi-year learning period during which new staff develop the breadth and depth of knowledge of the specific issues as well as of the legislative process. To meet these challenges, CRS has developed a multi-year plan to begin hiring replacement staff. In fiscal 1999, the Congress provided $435,858 to begin this hiring process, using the Graduate Recruit Program and the Law Recruit Program. The fiscal 2000 request seeks $559,052 to continue to hire staff to ensure the continuity of services to the Congress, while remaining within the full-time equivalent level provided in the fiscal 1999 budget.

-Security of Library Staff, Collections and Facilities-

During 1998, the Library's House and Senate oversight committees approved our comprehensive Security Plan, and the Congress approved supplemental appropriations totaling $16,975,000 for the Library's physical security. These two Congressional actions provide a framework for the security of the Library's collections, facilities, staff, visitors and other assets. As a result, additional security measures will be put in place during fiscal years 1999 and 2000: the recruitment of additional police, the installation of entry screening equipment at all public entrances, the design and installation of additional perimeter security enhancements, and the design and development of an improved intrusion detection system. The Library is working with the Capitol Police and the Architect of the Capitol to complete a memorandum of understanding, which will ensure proper coordination of all security efforts.

The supplemental appropriations in fiscal 1999 did not provide additional funds for collections physical security initiatives. Thus, for the fiscal year 2000 budget, the Library is requesting an increase of $1,352,201 to support three key collections security enhancements.

- Reader Registration - The Library's Security Plan specifies, as a minimum standard, the identification of all patrons requesting material from the collections. The Library is requesting an increase of $466,791 to implement this minimum standard in all reading rooms.

- Marking and Tagging Library Materials - The Library's Security Plan specifies, as a minimum standard, the marking and tagging of most material. The Congress approved and funded the marking and tagging of materials received via copyright deposit starting in fiscal 1999, and the Library requests $476,378 to expand marking and tagging to other sources of acquisitions (i.e., gifts, exchanges, purchases). - Contract Security Monitors - The Library is requesting an increase of $370,188 to improve the enforcement of security standards by placing security monitors in

five additional reading rooms where unique materials often of great value are used - Law, Geography and Map, Music, Prints and Photographs, and Rare Book and Special Collections. Contract security monitors are now used in the Manuscript and Main reading rooms to ensure that each patron is registered, enforce personal belongings restrictions, monitor the activities of visitors, and examine materials being removed. The Library asks that this successful program be expanded to these five additional important reading rooms.

-Law Library-

The Law Library of Congress maintains the largest collection of legal materials in the world and also houses a unique body of foreign-trained lawyers to supply legal research and analysis, primarily for the Congress, on the laws of other nations, international law, and comparative law. More than 200 jurisdictions are covered by Law Library specialists, some 80 percent of the sovereign entities of the world that issue laws and regulations. The Law Library utilizes this talent to maintain and develop the breadth and depth of a demanding collection, as well as to provide reference services whenever either chamber is in session (as mandated by the Congress). These are daunting responsibilities. The U.S. Courts, the executive branch, and the legal community also depend heavily on the Law Library's collections.

The Law Library has been creative in attempting to meet its responsibilities, particularly with the development of its Global Legal Information Network, but funding for 8.5 FTEs ($548,852) is crucially required. The funding would ensure adequate staffing for research and reference services, improve the security of the rare book room collections, and improve book retrieval services. The Law Library is also requesting $188,250 for contractual services to maintain the filing of looseleaf inserts. The integrity and currency of legal publications -- which contain laws, administrative rules and regulations, and legal interpretations -- must be maintained to be of continuing value to the Congress.

-Copyright Office-

The Library's Copyright Office promotes creativity and effective copyright protection -- annually processing more than 650,000 claims (representing more than 850,000 copies of works transferred to the Library) of which 550,000 claims are registered for copyright. The Copyright Office also responds annually to more than 395,000 requests for information.

On July 1, 1999, the Copyright Office plans to increase its filing fees and other statutory fee services. The new schedule of proposed fees was presented to the Congress for consideration at the beginning of February. The basic filing fee for registering a claim will increase from $20 to $30, and other statutory fees, such as those for filing renewals or recording a document, will also increase. These increases, coupled with the fee changes for special services which went into effect July 1, 1998, represent increases in some cases of as much as 225 percent. We expect fee increases to boost the Office's receipts by $4.8 million in fiscal year 2000. The new fee structure should provide 70 percent cost recovery for registration, recordation and related services. The Register's statement provides a more detailed explanation of the proposed increase.

The ability of the Copyright Office to serve the nation effectively requires restructuring and streamlining operations. The Library requests approval to use part of the additional receipts ($694,212) to redesign the workflow and to bolster its core staff of examiners, which will ensure the timely processing of claims for registration. To improve public service, efficiency, security, cash management, and contain costs, the Copyright Office must redesign its workflow and hire additional examiners.

The Library also requests authority to use part of the additional receipts to fund further growth of the CORDS effort ($143,988, see automation building blocks) and to fund newly imposed storage costs ($268,204) levied by the National Archives and Records Administration.

-National Library Service for the Blind and Physically Handicapped-

The Library administers a 67-year-old cooperative effort with state and local agencies and the United States Postal Service to provide free braille and recorded materials for blind and physically handicapped persons. The Library selects and produces full-length books and magazines in braille and on recorded disc and cassette and provides special playback equipment. We distribute reading materials and playback machines to a network of cooperating regional and subregional (local) libraries, who circulate those materials to eligible borrowers and returned to libraries by postage-free mail.

The fiscal year 2000 budget maintains program services by funding mandatory pay and price level increases totaling $1,209,000. The budget also supports the exploration of alternative digital technological possibilities that would provide a less costly, more efficient, internationally acceptable, user-friendly delivery system.

-Library Buildings and Grounds-

The Architect of the Capitol (AOC) is responsible for the structural and mechanical care and maintenance of the Library's buildings and grounds. In coordination with the Library, the AOC has requested a capital budget of $9,405,000, an increase of $6,238,000. The AOC capital budget includes funding for six projects totaling $6,350,000 in appropriations, that were requested by the Library. Library requested projects, as well as AOC identified projects, are prioritized based on critical need and in accordance with both the Library's Strategic and Security Plans. The six projects support four important areas: (1) the security of our collections by providing additional electronic card readers, alarm devices, and other protections ($1,400,000); (2) the preservation of the Library's collections as a result of improved environmental conditions for exhibit space ($450,000), (3) the support for and oversight of initial construction efforts at the National Audio-visual Conservation Center ($500,000); and (4) the acquisition of additional storage space by funding a second collections storage module at Fort Meade, Maryland ($4,000,000). Properly storing the Library's collections in secure, safe, and environmentally sound facilities is the most important step toward preserving our collections for future generations.

I urge the Committee to support the Architect's Library Buildings and Grounds budget and his position that reinvestment in the existing infrastructure is necessary and a prudent measure for the long-term support of legislative branch operations.

-Audio-visual Conservation Center-

The Library's House and Senate oversight committees have approved a Master Plan option for the renovation of the National Audio-visual Conservation Center in Culpeper, Virginia, which provides for the donor to retain ownership of the center through Phase I (2001). As a result, the Library requests an increase of $290,000 to fund fiscal 2000 operating costs, which are estimated to be $509,000. When ownership of the Center is transferred to the AOC, these operating costs will be reallocated between the AOC and the Library, in accordance with normal Library Buildings and Grounds budget practices. In August 1998, the Library began to store film at the center.

-National Film Preservation Foundation-

The Library is requesting an increase of $250,000 to fund the government's matching grant in accordance with section 209 of Public Law 104-285. To date, the National Film Preservation Foundation has received pledges totaling $1.2 million ($500,000 in actual receipts) from private persons and State and local governments.

The $250,000 increase would fund the government's matching share and support the preservation of our film heritage.

-James Madison Building Workstation Modernization Project-

The Library is requesting an increase of $1,528,000 to begin a five-year accelerated workstation modernization project in the James Madison building. We have replaced employee workstations in the Thomas Jefferson and John Adams buildings with modern furniture and equipment as a result of the renovation project. Furniture and equipment installed 20 years ago in the James Madison building, during an era of typewriters and long before the introduction of personal computers, must now be replaced to provide for ergonomically correct workstations in all three of the Library's Capitol Hill buildings. Poor workstation design contributes to the risk of injuries and lower staff productivity. An increase is required to complete the project within five years instead of the 16 plus years the current level of resources would require.

-Proposed Legislation-

During the 105th Congress, the Library's oversight and appropriations committees agreed upon authorizing legislation for the American Folklife Center (AFC) and the National Audio-visual Conservation Center. The Library is moving expeditiously to secure all appointments to the AFC board and to realize the master plan for the Culpeper site approved last December. During the last Congress, we also secured legislation for a commemorative coin to be issued in April 2000 in observance of the Library's Bicentennial. In discussing the Library's plans for its Bicentennial with our oversight committees, we stressed the continuing need for the Library to have improved statutory authority for its revolving and reimbursable funds. The 105th Congress approved a revolving fund to improve the accountability and statutory basis for the Cooperative Acquisitions Program. We will be seeking similar authority during this Congress to address the business operating needs of the Federal Research Division and FEDLINK, each of which serves a wide constituency within the Federal government. The bill is our top legislative priority for the 106th Congress. Passage of such legislation would address a critical element of our five-year legislative plan to improve and stabilize the Library's business operations.

-Office of Inspector General-

The Library requests an increase of $139,343 to fund two professional auditors in the Office of the Inspector General. The two auditors would concentrate on reviews of the Library's physical security and automated systems, both areas of critical importance to our operations.

-The Library's Bicentennial-

The Library will use its Bicentennial in the year 2000 less to celebrate our past than to leave a legacy for the future. We have crafted -- almost entirely with privately raised funds -- a multi-faceted Bicentennial Program "to inspire creativity in the years ahead by stimulating greater use of the Library of Congress and libraries everywhere." Bicentennial projects include: reconstituting Thomas Jefferson's original library through private donations; a "Favorite Poem" project spearheaded by the Library's Poet Laureate- a national photography contest, "Beyond Words: Celebrating America's Libraries," jointly conducted with the American Library Association; and a "Local Legacies" project to document unique local traditions from congressional districts throughout the nation for possible inclusion in the American Folklife Center's collections.

The kick-off event later this year for the Bicentennial will be a symposium on the Frontiers of the Mind in the 21st Century, which will bring together at the Library leading thinkers in various disciplines to talk about the way their field will change in the 21st century. The concept of "Gifts to the Nation" is central to the Bicentennial effort. The Library itself is a Congressional "Gift to the Nation." Sharing the Library's collections and information about the Congress with Americans in their local communities through an expanded National Digital Library is the Library's major gift to the nation.

-Summary-

The Library's budget request for fiscal year 2000 -- a net increase of 5.5 percent over fiscal 1999 or $20 million -- supports the building blocks for realizing our strategic priorities. Most of this increase ($16.6 million) is needed to fund mandatory pay raises (driven largely by the January 2000 pay raise of 4.4 percent) and unavoidable price-level increases.

By funding the Library's fiscal year 2000 budget request, the Congress would support the major transition of staff and operations that must take place to permit the Library to head into the 21 st century with the foundation in place to provide the maximum service to the Congress and to its constituents.

For fiscal year 2000, we submit a budget request that will enable the Library of Congress to continue to make major contributions to the work of the Congress and to the creative life of the American people.

Return to Headlines

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Sunexpert Magazine
Circ – 82,308
Monthly
FEBRUARY 1999

URL/New Products

Content Management Software Service

Unified Research Laboratories has announced Version 3.0 of its I-Gear Internet content management software. I-Gear reportedly allows network administrators to establish unique Internet access permissions for individual users and computers, or groups of users and computers, across a network. Permissions can be based on identity, location or time of day. In addition, I-Gear provides for user-transparent auditing of unfiltered access, as well as detailed summary reports that can be used to pinpoint policy violations without restricting access, Unified Research says.

I-Gear 3.0 features a common object-oriented interface across all platforms, the ability to create virtual user accounts and multithreaded execution for increased efficiency and scalability. It is available for Solaris and Windows NT platforms and operates on any network running Check Point FireWall-1 from Check Point Software Technologies Ltd. Pricing for I-Gear starts at $2,495 for a 50-user simultaneous license. URLabs also offers a revenue-sharing program to Internet service providers (ISPs) that resell I-Gear and Mail-Gear software to subscribers.

Unified Research Laboratories Inc.
303 Butler Farm Road, Ste. 106
Hampton, VA 23666
http://www.urlabs.com
Circle 202

Speed Up CGI Scripts

Binary Evolution has announced an upgrade to VelociGen, its Web server plug-in, which is said to increase the performance of Web sites that depend on Perl as their scripting language. VelociGen 1.1 can be used in several modes, including 100-percent-compatible Mode, which speeds up CGI scripts without modifying existing code; Embedded Mode, which allows developers to mix Perl and Tcl code within an HTML page; and Persistent Mode, which precompiles and caches scripts for maximum speed.

Binary Evolution has also announced upgrades to a free load-testing tool that measures server speed under various user loads. WebMeter 3 is said to help quantify the benefit VelociGen offers and helps tune its software.

VelociGen installs on Solaris, IRIX, HP-UX, AIX and Linux platforms, as well as Windows NT for Intel. Supported Web servers include Netscape Communications Corp. FastTrack Enterprise server, O'Reilly & Associates Inc. WebSite Professional server and Microsoft Corp. Internet Information Server.

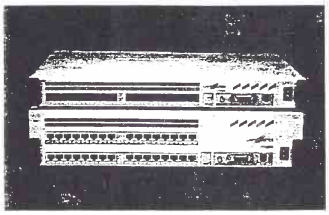
Binary Evolution
1 Kendall Square, Bldg. 200
Cambridge, MA 02139
http://www.binevolve.com
Circle 203

Thin Servers from Lantronix

Lantronix has announced one new thin server and three new terminal servers aimed at Ethernet networks. The MSS100 microthin server provides a serial-to-Ethernet conversion for environments supporting 10-Mb/s Ethernet and 100-Mb/s Fast Ethernet via a 10/100-RJ45 Ethernet interface with autosensing/autonegotiating capabilities. A DB-25 serial port with throughput of up to 115 Kb/s and full modem control is complemented by concurrent support of TCP/IP, IPX, AppleTalk and NetBIOS/NetBEUI, Lantronix says. Support for Digital Equipment Corp.'s Local Area Transport (LAT) is also available for an additional fee.

Also included with the MSS100 microthin server is Lantronix's redirector software, which allows network-based PCs to access the MSS serial port as if it were connected directly to the PC, the company says. Operating software resides in the Flash ROM, which may be updated for free. The MSS100 costs $499.

Lantronix has also unveiled the ETS32PR and ETS16PR terminal servers (featuring 32 and 16 serial ports, respectively) for networks needing higher port density, and the ETS4P terminal server model, which provides a combination of four Centronics parallel ports and four RJ45 serial ports for added flexibility in connecting terminals and other peripherals to one or more host computers on an Ethernet network. Installation



of the servers is simplified by the company's EZWebCon software, a GUI that enables administrators to manage the server via a Web browser or DECnet login, Lantronix says.

The ETS32PR, ETS16PR and ETS4P cost $2,995, $2,195 and $1,195, respectively.

Lantronix
15353 Barranca Pkwy.
Irvine, CA 92618
http://www.lantronix.com
Circle 201

Site Pro, Microsoft Corp. Internet Information Server (IIS)/Personal Web Server (PWS) and any other ISAPI-compatible Web server. Pricing ranges from free for noncommercial Linux applications to $4,999 for commercial UNIX platforms.

Binary Evolution Inc.
P.O. Box 3258
Rancho Santa Fe, CA 92067
http://www.binaryevolution.com
Circle 203

Enhanced Web Search Software

Infoseek, operator of the popular search engine site, has upgraded its Ultraseek Server navigation application. Several enhancements have been made to the product, including support for documents created in eXtensible Markup Language (XML), as well as the ability to manage indices and URLs on mirror sites. In addition, Infoseek has added support for Secure Sockets Layer (SSL) encryption, which enables Ultraseek to find documents served via HTTPS. The company has also added language support for Swedish, Danish, Finnish and Norwegian. Ultraseek runs on Solaris 2.5+ and Windows NT 4.0. Administrators can manage the software through Netscape Communications Corp. Navigator 3.0+ or Microsoft Corp. Internet Explorer 3.0. Pricing starts at $995 for a 1,000-document site or $4,995 for a 10,000-document site.

Infoseek Corp.
1399 Moffett Park Drive
Sunnyvale, CA 94089
http://info.infoseek.com
Circle 204

XML Business Forms Builder/Viewer

InternetForms Viewer 4.0.4 Gold and InternetForms Designer 1.1.1 Gold are the latest offerings from UWI.Com. InternetForms Viewer 4.0.4 Gold is designed to allow users to view, complete and submit eXtensible Markup Language (XML)-based documents from within a Web browser. It offers internal logic and computations, enclosures and context-sensitive help, the company says. InternetForms Designer 1.1.1 Gold is said to allow users to create complex Web-based forms in a drag-and-drop environment without having to learn XML syntax. Both products support eXtensible Forms Description Language (XFDL), an open, XML-based protocol for creating, completing and distributing business forms.

InternetForms Viewer costs $119 per seat for corporate users, or $3,500 for public Web site use. InternetForms Designer costs $1,495.

UWI.Com
2300 Clayton Road, Ste. 1590
Concord, CA 94520
http://www.uwi.com
Circle 205

Platform-Independent Java Application Server

Esemplare Development has released Galileo 1.5. Galileo is a fully scalable, platform-independent application server, which is said to allow developers to create database-driven Web applications using custom HTML tags. It has been designed to simplify the design, development, deployment and maintenance of Web-based applications, Esemplare says.



Written in Java, Galileo runs on any server supporting Java servlets. It comprises three components—a servlet, dispatcher and processor—and can be downloaded for free from the company's Web site.

Esemplare Development
32 Monsey Place
Staten Island, NY 10303
http://www.esemplare.com
Circle 206

Customized Web Content

Web site designers can now use Jio, the latest software offering from iDream Software, to create online catalogs that reportedly allow site visitors to gather products of interest into one area and then mix, match and compare them.

Jio creates Java-based applets that act as an Internet storefront and features a full set of components for creating and customizing content. The applets run in any Java-enabled browser, the company says. In addition, Jio comes with 110 customized templates so users can select a catalog style that is compatible with their Web site and includes JPEG, GIF and Meta file support. The content authoring component of Jio runs on Windows 95/98/NT. Java Run-Time environment 1.1.6 is required for Web deployment of the catalog applets. A single server license costs $14,995.

iDream Software LLC
18939 120th Ave. N.E., Ste. 111
Bothell, WA 98011
http://www.idreamsoftware.com
Circle 207

Open-Source Application Server

Hamilton, a Java-based Web application server, is currently available as open-source software from Microstate. Because it is the first application server to be released to developers, Hamilton fills a real need in the open-source software community, the company says.

Microstate sees Hamilton being used by any software development organization that needs an application server for thin-client, Web-based business applications, especially those that pool data from diverse, heterogeneous information sources such as databases and wire feeds. Hamilton can be downloaded free of charge from the company's Web site.

Microstate Corp.
11166 Main St., Ste. 100
Fairfax, VA 22030
http://www.microstate.com
Circle 208

Continental Site Analysis

If you want to track the number of hits your Web site receives from the South Pole, then Active Concepts Funnel Web 2.5 just might help. This latest release offers new reporting features based on geographic regions and traffic paths through a site. Active Concepts has also added domain aggregating, offsite processing and additional operating system support.

a brief highlight of the information in the other three panels. Alexa 3.0 can be downloaded for free from the company's Web site.

Alexa Internet
P.O. Box 29141
San Francisco, CA 94129
http://www.alexa.com
Circle 213

Cryptographic VPN System

CellCase2 is the latest addition to Celotek's (formerly Secant Network Technologies) cryptographic product line. Positioned as a virtual private network (VPN) system, CellCase2 is designed to secure data traveling over Asynchronous Transfer Mode (ATM) networks via T1 or E1 data rates, the company says.

With CellCase2, data (including multimedia files) can be securely transmitted over public switch telephone networks, Celotek says. The company touts this as an alternative to using a leased line or creating a private network. CellCase2 offers strong cryptography with Data Encryption Standard (DES), triple DES, Electronic Code Book (ECB) or counter mode data encryption, as well as Rivest-Shamir-Adleman (RSA), Message Digest 5 (MD5) and triple DES key management. Celotek has received approval from the U.S. Department of Commerce to export 168-bit triple DES encryption (without key recovery) to the banking industry. CellCase2 costs $17,500.

Celotek Corp.
P.O. Box 14285
Research Triangle Park, NC 27709
http://www.celotek.com
Circle 214

Create Sophisticated Storefronts

With iHTML Merchant 2.0 from Inline Internet Systems, Internet service providers (ISPs), Web developers and business owners can now deploy sophisticated online storefronts complete with shopping baskets, product catalogs, store search functionality, banner ad management, sales reports, customer management, shipping calculations, product style handling, electronic software distribution support and a fast ordering process, the company says.

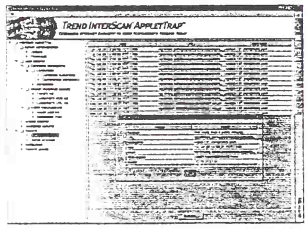
The product supports several transaction payment systems, including CyberCash, IC Verify, PC Authorize, Authorize Net, Internet Secure and Redi-Check. iHTML Merchant is built using Inline's iHTML programming language and can be customized with open-source access to the store software. A Web browser creation and management interface is also available for novice users.

iHTML and iHTML Merchant run on Solaris, Linux, BSD, FreeBSD and Windows via Apache, O'Reilly & Associates Inc., Netscape Communications Corp. or Microsoft Corp. Web servers. Pricing starts at $739. Upgrades from Version 1.0 cost $149.

Inline Internet Systems Inc.
7305 Rapistan Court
Mississauga, Ontario
Canada L5N 5Z4
http://www.inline.net
Circle 215

Tool to Trap Malicious Code

Trend Micro's InterScan AppletTrap is designed to stop malicious JavaScript applets and ActiveX objects at the Internet gateway before they can access and/or damage files on a user's desktop.



AppletTrap, which runs on the server, has three levels of security: certificate verification, a filter to identify known malicious code and a security monitor that checks an applet's behavior against corporate security policy. When a user attempts to download an applet or ActiveX object, the object's digital certificate is compared to a list of allowed certificate publishers, as well as a database of known malicious code. If an applet is found to be malicious, or has come from an unapproved source, it is blocked and an alert is sent to the user, the company says. Applets and ActiveX objects that are allowed to progress to the user's desktop are monitored for suspicious behavior. If an applet violates security policy, it is either automatically shut down or the user is given the choice of whether or not to allow it to continue (the network administrator can decide how much override control to give end users and can set different policy rules for different users and groups).

In addition, AppletTrap provides a log of system events so an administrator can track malicious applet activity and modify security policy accordingly, Trend Micro says.

AppletTrap runs on Windows NT 4.0, as well as any UNIX platform equipped with a Java Virtual Machine (JVM). However, it can only block—not selectively filter—ActiveX objects when running on UNIX. For full functionality, the company recommends running it on a Windows NT server. Pricing for AppletTrap starts at $600 for 25 users.

Trend Micro Inc.
10101 N. DeAnza Blvd., Ste. 400
Cupertino, CA 95014
http://www.trendmicro.com
Circle 216

Module to Parse XML Documents

Perl, the language behind many dynamic Web sites and eXtensible Markup Language (XML) can now be used with a new Perl module from O'Reilly & Associates. XML::Parser reportedly provides Perl developers with an efficient way to break down and process XML document parts. Developed in part by Perl creator Larry Wall, XML::Parser is based on the expat C library (expat, like Perl and XML, is Unicode-aware and is reportedly very fast). On the Windows platform, XML::Parser is available as part of the ActiveState ActivePerl development package from ActiveState Tool Corp. XML::Parser is available free of charge to UNIX developers from the Comprehensive Perl Archive Network (CPAN) Perl site.

O'Reilly & Associates Inc.
101 Morris St.
Sebastopol, CA 95472
http://www.oreilly.com
Circle 217

NEWMEDIA
San Mateo, CA

Circ – 217,491
16 Times/Year

FEBRUARY 1999

THE SEARCH CONTINUES

BY SHELLY BRISBIN

In the headlong rush to transform themselves into portals, sites that began life as search engines have left something behind—good old-fashioned searching. Even sophisticated Boolean operations can yield notoriously inaccurate or outdated results. The listings are further distorted by the keyword spamming that companies use to steer their sites to the top of the list. Portals use relevancy ranking to partially offset keyword manipulation, but they use similar techniques to steer users onto portal-branded properties or sites owned by partners.

Fortunately, new search technology is bringing light to the murky corners of the Net. The most immediate threats to the portals are browser-based search and indexing functions. Microsoft's Internet Explorer 5.0 includes a "search assistant" that can automatically select different search engines depending on the query. Netscape 4.5, meanwhile, offers a "smart browser" that brings up a streamlined index of popular sites in response to search queries, including prominent links to Netscape's own NetCenter pages.

While the browser vendors claim filtering makes life easier for casual searchers, expert Internet researchers are migrating to metasearch tools that can simultaneously comb the results of other search engines as well as the contents of local hard drives. These desktop tools, which supply their own relevance-ranking schemes, claim to bypass the portals' directed results. The most recent entrant is Apple's Sherlock, a find utility built into Mac OS 8.5 that allows Mac users to query several search engines simultaneously. Similar metasearch utilities for Windows include Mata Hari, from The WebTools Company, and Internet EZ Search from American Systems.

Bundling may be key to these tools' success. "Client-side search tools are not going to make it [on their own], but I can see these things being bundled with a browser," said Paul Hagen, an analyst at Forrester Research.

Other trends that should change Web hunting:

- **Collaborative Search.** Some intriguing new search tools customize based on the history of an individual or a group. The Alexa Internet plug-in, now bundled with both Explorer and Communicator, recommends sites based on a user's previous surfing activity. A rival program called Direct Hit, available on HotBot and America Online's ICQ tool, ranks search results according to their popularity among other users.
- **Natural-Language Search.** To open up search to a wider audience, vendors are letting users ask real-life questions. Ask AltaVista, formerly Ask Jeeves, until acquired by AltaVista, lets users pose questions such as: "What is the temperature in Toronto?"
- **Media Search.** As Web bandwidth increases, so does Web media, but it tends to get lost in the text shuffle. While most search sites offer image searches, AltaVista recently upped the ante with AV Photo Finder, which offers thumbnail results of media searches. Excite, meanwhile, recently announced a search service that focuses on RealNetworks' streaming media content.
- **Paid Search.** Advertisers are paying and pressuring portals for prime position in results lists, so why not bring this dynamic into the light of day? That's the thinking behind GoTo.com, which charges advertisers for position. To keep it above-board, GoTo reports to users how much money changes hands.
- **XML Search.** Though still in its infancy, XML promises to make searching very precise. For instance, if you were searching through classified ads, specifying that "Excel" had to be in the "product" tag would exclude references to temporary workers with experience in Excel. New search engines tuned to XML content may actually improve accuracy over HTML searches. In October, Infoseek announced its Ultraseek Server 3.0 "Content Classification Engine," which uses XML to index, organize, and update Web sites automatically.
- **Context Search.** The problem with most search engines is not that you can't find the link you want, but that it's buried 247th in a list of 300. New algorithms aim to remove much of the randomness from results. IBM's Clever technology, for example, analyzes links and the text surrounding them, returning those that offer the most meaningful responses. (See www.almaden.ibm.com/cs/k53/clever.html.)

Rank	Web Site	% Reach
1	Yahoo!	46.9
6	Excite	25.4
7	Lycos	22.6
8	Infoseek	20.1
10	AltaVista	18.0
21	HotBot	9.0

Source: Media Metrix

THE SEEKER *Search engines account for five of the top 10 Web sites ranked for their reach—the percentage of all Web traffic over one month. Other sites, such as AOL, MSN, and Netscape, offer searching, also. New technologies may soon transform this landscape.*

Bacon's Information Today Feb. 15, 1999

Internet Insights

by Péter Jacsó

A New Browser (Utility) Emerges

NeoPlanet has several great features that IE and Navigator should, too

Developers of Internet browsers—with the possible exception of Opera—have mostly given up their efforts to compete with Microsoft Internet Explorer (IE) and Netscape Navigator. While Microsoft and Netscape are slugging it out, the smaller developers must have felt that it was better to stay out of the ring than get knocked out. Microsoft has been quickly catching up with Netscape, and, by the end of 1998, the two had roughly equal market share. America Online's buyout of Netscape may slow Microsoft's gains on the Netscape browser if AOL does not destroy Navigator with this acquisition—as it did when it purchased some other software. (For more on this, see Robin Peek's Focus on Publishing column, page 30.)

On the other hand, the number of third-party products that require Internet Explorer 3.x or better grew in 1998. However, none of them seems so important as BigFoot International, Inc.'s NeoPlanet browser utility. It is not a browser by itself, as it cannot run without core elements of Internet Explorer or Windows 98—which has the same core Internet browsing code elements—installed, but it appears as one to the end users. The fact that NeoPlanet requires IE merely to be installed (and to have added some features during installation) but not running reinforces the impression that NeoPlanet is a

A Lightweight Add-on

NeoPlanet charms the user from the moment it's downloaded. It is less than 2 MB in size, so even on a 28.8-Kbps modem it takes less than 20 minutes to download (under normal circumstances). Installation is a breeze, or I should say Snap, as NeoPlanet integrates this fairly new Web portal and then some. It takes about 4 to 5 minutes to set up from the downloaded .exe file. The clean and slick interface is perhaps love at first sight (see Figure 1), but one of the most attractive and unique features of this software becomes evident only after you start using it. The key to its appeal is how you can personalize the whole interface to your liking.

NeoPlanet offers channels as subject guides/directories—as most other portal sites do—but with several essential differences. The channel pane on the right side of the screen remains visible. On other portal sites, one may feel lost as one goes deeper into subcategories. Not so in NeoPlanet. With the help of the channel pane, it is so easy to trace back your steps that even Hansel and Gretel would endorse it. When you click on a channel such as Travel, the home page of Preview Travel—*the* primary travel site (in the judgment of Snap's editors, anyway)—shows up in the main pane. The subcategories of the Travel

these sites to your preference, as well as add and delete sites from the channel.

Different Strokes, Different Folks

If you feel that the channel pane or the subcategory bar or the site bar take up too much space on the screen, you can make them disappear with a click of the mouse—and then call them back with another click when you need them. The top bars also can

> "The key to its appeal is how you can personalize the whole interface to your liking."

be shrunk or enlarged. This is very intuitive, thanks to the rollover technique that displays an informative label as you pass your cursor over the navigational buttons and gizmos.

menu and drag their URLs to the appropriate NeoPlanet channel or subchannel.

There is a Channel Archive, so if you change your mind and want to reinstate a channel that you had removed it can be invoked from the Channels à la Carte list. The archive also includes a Local Channels list (currently only for a dozen metropolises) and a User Channels list, if you'd prefer the choices of others who've shared their favorites with BigFoot. You may also exchange channels directly with others by simply importing and exporting channel files.

Schemes are additional interface-design elements. They define the look and feel of the interface—using different icons, background, font styles, and colors—but do not change the locations of the components on the screen. Beyond the default interface, there are over a dozen other predefined ones in the Scheme Archive. Most of them are excellent by anyone's standard and provide a refreshing choice when you get bored with the default interface. (See Figure 4.) During the holidays alone there were four extra schemes: Christmas, Xmas, Hanukkah, and Kwanzaa. There certainly will be many more schemes to come as users are encouraged to design and submit their own so that BigFoot may include them in the Scheme Archive. Schemes also can be directly imported and exported among users.

Built-in Goodies

NeoPlanet brings not only a refreshingly attractive and intuitive interface, but also adds a lot of extra functionality borrowing from the current and upcoming versions of IE and Navigator. In the rightmost part of the toolbar, you can spot the What's Related button. Clicking on it will list (in an insert window) sites that are considered related to

FROM : ANTENNA GROUP PHONE NO. : 415 896 1894 Mar. 22 1999 03:24PM P3

FROM : ANTENNA GROUP PHONE NO. : 415 896 1094 Mar. 22 1999 03:25PM P4

browser on its own. In my opinion, it has a very pretty interface with lots of brain and charisma. I found NeoPlanet so attractive and smart that ever since it has been installed, I've made it my default "browser"—many of *IT*'s readers would do well to do the same. I'll explain why.

main pane. The side categories of the Travel Channel (Online Agents, Guides, Travel Writing, and Maps) appear above the main pane along with the name of the specific preferred sites recommended by the editors of Snap, such as Expedia, Travelocity, and Fodor. (See Figure 2.) You may rearrange

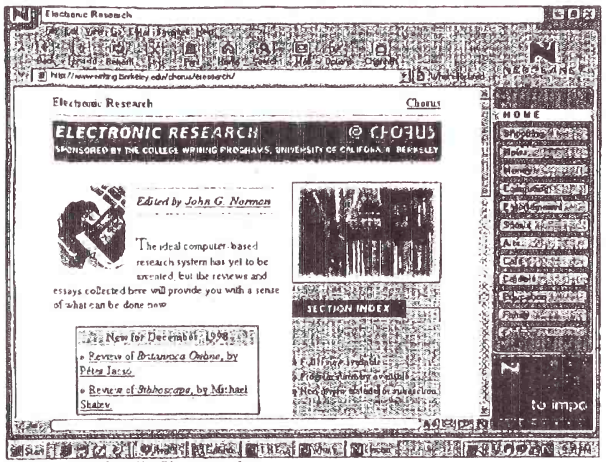


Figure 1: Standard NeoPlanet interface

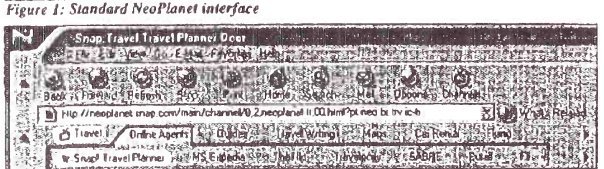


Figure 2: Subcategories and Web sites of the Travel Channel

the navigational buttons and gizmos.

The big deal is, however, that you may customize the content of the channel pane at every level: the channel choices, the subcategories, and the site list. If you don't care about certain categories, subcategories, or specific sites using the Channel Designer feature, you may remove any elements in the channel pane, as well as add new ones down to the site level. I have added a channel for some of my favorite radio stations and another one for professional journals. (See Figure 3.) Editing is as intuitive as in IE's Favorites collection, but your favorite channels and subchannels remain visible as long as you want them to. During installation, NeoPlanet gets your cookies, bookmarks, and favorite sites defined in both IE and Navigator. Just click on them from the pull-down Favorites

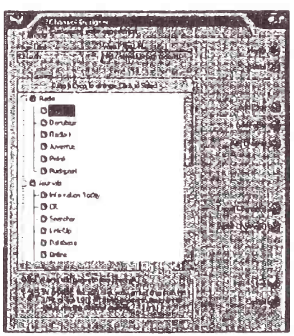


Figure 3: User-defined channels and sites

window) sites that are considered related to the one you are looking at from Alexa's Related Links database. This is a feature from Netscape Communicator 4.5 that went into public beta testing at the end of 1998.

NeoPlanet also installs its own e-mail client, so you don't need to invoke a separate e-mail program. This can be a godsend for those who have relatively little RAM. The e-mail program has all the trimmings of the best of this genre, including address book, spell checker, file attachment, user-defined folders, saving in draft format, selection of font type, color, bolding, italicizing, underlining, and text-centering.

Enhanced browsing offers great convenience. For a starter, it offers autocompletion of URLs just as the latest Navigator and IE versions do. It is enough to type in "infotoday"—NeoPlanet will add the "http://www." prefix and the ".com" suffix. If the site is not found, it will automatically try the ".net" suffix as Navigator does. So if the user enters "emediapro" for E-Media Professional's site, it will be found even though it's "http://www.emediapro.net." NeoPlanet also offers two other options. If the site is still not found, it will use the RealName database and look for Web sites of companies and organizations whose names match the search string entered, even if its core URL does not. This is good for those who enter "onlinetoday" instead of "ont," the core of the full URL: "http://www.ont.com." And if it is *still* not found, NeoPlanet will do a keyword search of the words entered in the URL cell. These options can be enabled or disabled by the user, and Web-site own-

FROM : ANTENNA GROUP PHONE NO. : 415 896 1094 Mar. 22 1999 03:27PM P5



Figure 4: An alternate interface scheme

ers must register with RealName for this service. The cost for the site owners is $100 for a year and well worth it. The beauty of NeoPlanet is that the RealName look-up need not be user-initiated: It is automatic unless the user specifically turns it off.

It is disappointing that NeoPlanet did not pick another nice feature from Navigator that is not in IE: print preview before actual printing. This is essential to avoid wasting paper printing all those Web pages that have just one or two (probably irrelevant) lines more than can fit on a single (paper) page. On the bright side, NeoPlanet offers users the ability to limit a Web search to some predefined domains (News Stories, Shopping, Software, Business Data, etc.) similar to the beta version of IE 5. Clicking on the domain label News, the search with the word "Hawaii" will be restricted to sites that are classified as news sites. Clicking on the Travel domain button will restrict the search about Hawaii to sites that are travel-related and that discuss Hawaii. Oddly, the domain limiting did not work when the Movies domain was selected, even though the search is automatically submitted to MovieFinder (which has 16 movies with Hawaii in the title)—and *this* you cannot customize. Making Internet Movie Database the default search site would be far better as it has more than twice as many for this search example as MovieFinder had, and is a more comprehensive database, in my opinion. The Advanced Search option invokes a branded version of Inktomi, the software used by Microsoft's portal and HotBot, among others. It is more than icing on the cake that NeoPlanet has a built-in modem-booster code.

All in all, this is outstanding software that costs nothing. It found a niche that both of the two superbrowsers neglected in favor of other developments: an attractive, highly customizable, and very intuitive interface. Together with its content and substance enhancements, NeoPlanet turns out to be an excellent tool set. It is soon to be available for Mac users and on a version that piggybacks on Navigator.

Péter Jacsó is associate professor of library and information science at the Department of Information and Computer Sciences at the University of Hawaii. He won the 1998 Louis Shores–Oryx Press Award from ALA's Reference and User Services Association for his discerning database reviews. His e-mail address is jacso@hawaii.edu.

Article 1 Return to Headlines

Reviews
View From The Bunker
Almost Managed To Miss The New Browser
Oliver Rist

02/15/99
InternetWeek
Page 33
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Sometimes I'm so busy delving into arcane networking minutiae that I miss the bigger picture. No, I'm not talking about Monica Lewinsky's Liberty Bell hairdo, I'm talking about the fact that a third browser has finally entered the fray. And this one is slick enough to compete.

Bigfoot International Inc.'s NeoPlanet 2.0 is a nice little 2 MB download (www.neoplanet.com) that results in a cool new Web browser that crashes only as often as Internet Explorer does. Which is probably because it is based on the IE engine, with Bigfoot adding its two cents on the front end. It supports most of what IE does, including Java and scripting, with Bigfoot and Microsoft working on enhancements.

So what makes it different? One nonword: "customizability." You can change everything about this browser, including its look and sound. The product comes with 15 available schemes.

What makes it even more attractive is its built-in set of corporate-sponsored Web links. These are organized in toolbar formation, touching everything from news to shopping, money, sports and much more. This means that users can quickly configure NeoPlanet to act not only as a browser but as a truly personalized portal page, right down to its look, feel and sound.

Bigfoot's accounting department is happy because channel sponsors (the integrated Web links) pay an advertising fee that is supplemented with more ads in the browser face itself and, allegedly, a portion of goods sold via its interface. Users are happy because they're greeted with a wide array of information immediately at their fingertips that they can add to and customize.

NeoPlanet comes with an integrated e-mail reader, though we would have liked a news reader as well. Even cooler, the engine is connected to a context-sensitive Web link database that lets users hit a "What's Related" option to see a list of links relevant to what they're viewing at the moment. **Netscape** 4.5 has the same feature, and both it and NeoPlanet use the same source database from **Alexa** Internet.

While NeoPlanet doesn't offer many added features beyond e-mail-unlike **Netscape** with its support for news and Web page design-Bigfoot has gotten the jump on its competition in one way: grabbing market share for PC desktops. **Netscape** has tried this by automatically opening its browsers to the portal-like **Netscape** Web site, while IE tries something similar and touts its Active Desktop enhancement on top of that. NeoPlanet slips neatly between the need for a too-distant outside corporate Web site and the headache and invasion of Active Desktop on the rest of the PC's interface. You get to build whatever you like without resorting to an outside Web connection, and you get to keep it in the NeoPlanet box-not running amok on the system like Active Desktop.

Though the "channel" Web links seem a little busy, you can edit them out. If corporate desktops are Bigfoot's concern, I hope it adds a way to distribute a specific customization of the interface to a large number of systems without having to re-edit it every time. For small offices and power users, though, this is well worth the download.

Oliver Rist is contributing technical editor at InternetWeek and technical director at Grand Central Networks Labs. He can be reached at orist@cmp.com.

February 15, 1999

Selling Power
Circ – 196,353
10 Times/Year
FEBRUARY 15, 1999
Bacon's

AMAZING NUMBERS

Edited by Anne Beals

More than 54 million Americans are expected to travel abroad this year.

[Source: Newsweek]

In 1991-92 the population of US boarding/day schools was 30,693; in 1997-98 it was 35,062 an increase of nearly 15%.

[Source: The Exeter Bulletin]

New York City hauls 27,000 tons of waste to its Staten Island landfill each day.

[Source: Discover]

...NG UP THE WEB

beaniemom.com, a Web site devoted to Beanie Baby news, gets 450,000 hits a day.

[Source: Fortune]





The average depth of the oceans is 10,000 feet with trenches that drop to 30,000 feet. That is also the average cruising altitude of jet planes above the earth.

[Source: Discover]

...SCENT WINDOW

A full 75% of US households have no children under 18.

[Source: The American Spectator]

Earth's circumference at the equator measures 24,902 miles.

[Source: The Cambridge Factfinder]

LOADS OF ROADS

China had a road system of 20,000 miles by the third ce...ttury B.C.

In America 50 percent of all deaths from disease are due to cardiovascular causes.

[Source: CNN]

Forty-seven percent of businesspeople traveling on corporate jets are not top executives but are likely to be from such diverse departments as project management, sales, engineering and accounting.

[Source: National Travel Association]

The residents and businesses of New York City's Manhattan Island use 1.3 billion gallons of water per day.

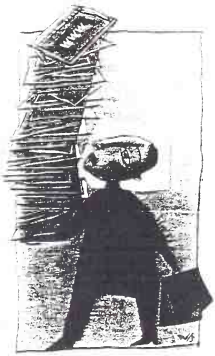
[Source: Discover]

COST OF LIVING DECREASE

In 1954 a color TV (if you could find one) took 562 hours to earn; today, 23 hours. In 1919 a chicken took 2.6 hours to earn; today, .24 hours.

[Source: Money...]

There are 1.5 million new Web pages published



per day. Every day there are 186 new books published.

Source: Alexa Internet and R.R. Bowker Co.

GO Network
GO Kids GO Family GO Money GO Sports GO Home
INFOSEEK SEARCH ABCNEWS Web
Search
About GO Network
Sign in
Free E-mail

ABC NEWS Business.com
click here to buy online.
oneratestates

WIRE Feb 0 7 36 p.m. ET

"Targeted advertising" takes on new meaning online

Small Business
Personal Finance
Market Details
The Sectors
Mutual Funds
Raw News

REUTERS

RAW NEWS

PALO ALTO, Calif (Reuters) - Amazon.com would not have much luck hanging an ad in the window of a Barnes & Noble store. But it has managed to place online ads so that they pop up on the computer screen right on top of the barnesandnoble.com Web site.

PRESENTED BY
AT&T WIRELESS SERVICES

British Airways strategically places some of its Internet ads so they can be superimposed on rival airline's Web sites. And the online vitamin store, VitaminShoppe.com, has found a way to get its name right below other e-commerce pages that sell natural food supplements.

Talk about targeted advertising. Internet retailers now have a way to advertise right in their competitors' virtual store fronts -- without being accused of trespassing.

The unusual service comes from Alexa Internet (www.alexa.com), a free Web navigation business that has attracted more than 100 advertisers including e-commerce heavyweights like Amazon.com and CDNow, since it began selling ad space last year.

Alexa is a service that tracks Internet users' surfing patterns to deliver them "smart links" to relevant sites and in-depth statistics on the pages they visit. People who go to Alexa's Web site to download the service get a second toolbar on their computer screen.

The toolbar delivers statistics on different Web sites, like a company's address, the number of online visitors it receives, and financial data. It also delivers ads, and Alexa can target the ads so they only appear when the user is visiting designated Web sites.

Amazon.com, for instance, bought ads to appear by a list of other book-related sites, like barnesandnoble.com, the U.S. Library of Congress, and various campus bookstores. So when an Alexa customer logs onto barnesandnoble.com, a small ad for Amazon appears at the bottom of the screen. Click that ad and it becomes quite big, superimposed on top of the barnesandnoble page.

"It's as close as you can get to putting an ad on somebody's front door," explains Bruce Gilliat, Chief Operating Officer of Alexa, which has an audience of about 1.5 million Internet users.

Gilliat also says the Alexa toolbar provides a way to get a company name on some of the sites, like the Library of Congress, that do not accept ads. Because the ad is linked to the Alexa toolbar, it is not considered to be actually running on the Web site, even though it appears on the same screen.

^REUTERS@

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About GO Network | Sign in | Free E-mail



Net Ads Really Focused

Service Allows Firms to Advertise on Competitors. Sites

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Personal Finance
Market Details
The Sectors
Mutual Funds
Raw News

BUSINESS HEADLINES
American Stoppage Takes Toll
Wireless Power in the Palm of Your Hand
TheStreet.com: Street Set to Bounce Back
Sizing Up the Future of Portals
Citigroup Execs Leave Visa Board



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Ad Services Catches On

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Advertise on a Wide Category

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SUMMARY

Alexa Internet gives users info on Web sites they search, but it also allows advertisers to pop up ads — even on top of competitors' sites.

By Name
By Symbol
GET QUOTE
Alexa Internet

"It's as close as you can get to putting an ad on somebody's front door."
Bruce Gilliat, Alexa Internet CEO

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WIRED NEWS

Watson, Come Quick! We're Online

by Ronald Warren Deutsch

12:00 p.m. 11-Feb-99 PST

The Library of Congress can reach its five-year goal of digitizing 5 million items from its collections and developing educational support materials and lessons by 2000, thanks to a US$3.5 million grant from AT&T.

The grant, the largest corporate donation to the project to date, will be used to digitize the Alexander Graham Bell Family Collection and the Samuel Morse Collection. Bell's original 1876 sketches for the first telephone and his laboratory journals will be uploaded to the Library of Congress site. Morse invented the telegraph, and a copy of the first telegraph tape is one item from the Morse collection to be digitized.

"We believe that the National Digital Library is an initiative both Alexander Graham Bell and Samuel Morse would applaud, given their interest in technology to facilitate the exchange of information across great distances," said James Billington, librarian of Congress, in a statement Wednesday.

The new items will join more than 40 collections and over 500,000 items already available online through the National Digital Library's American Memory project. The project is expected to include an enormous variety of items from the Library of Congress' collection, ranging from the letters of the first 23 presidents to Matthew Brady's Civil War photographs to some of George Gershwin's original scores.

"It's a great thing for children," said Jeff Roberts, AT&T spokesman. "A kid in the Ozarks can have the same opportunities now to be exposed to these items as a kid living in Washington, DC."

AT&T reportedly donates over $60 million a year to various organizations, with at least half going to educational projects for students.

The National Digital Library began in 1995 to create a "library without walls." Many of the items were previously only available to scholars because of their fragility and special handling needs. The Library of Congress, founded in 1800, is one of the world's largest repositories of historical artifacts and receives roughly 31,000 items a day. Billington, who received a lifetime appointment in 1987 as the 13th chief librarian, said the toughest job is deciding which items to preserve without editorializing.

Late last year, software firm Alexa donated to the library a sculpture of the Web. The installation flashes random pages taken from the more than 700,000 Web sites Alexa has archived since 1996.

Related Wired Links:

Alexa's Gift to the Government
14 Oct '98

American Memory Project Puts History Online
13 Apr '97

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THE INDUSTRY STANDARD
THE NEWSMAGAZINE OF THE INTERNET ECONOMY

January 29, 1999

New Media Gets Newer

Some small New York firms are combining code and content to open up the Internet experience.

By Jason Chervokas and Tom Watson

In the battle to capture the attention of fickle Web surfers, Microsoft, Netscape, America Online and the big portal players would seem to hold all the cards. The browser, after all, defines how Web content is seen and used. Yahoo, Excite and the other portals labor ceaselessly to find new ways to keep customers focused on their sites.

But a group of little-known companies is developing a whole new set of techniques – around, through or even without browsers or portals. Their work is helping to redefine the Internet experience – not on a grand scale, perhaps, but with significant effect. These start-ups are building software packages that piggyback on existing browsers and e-mail clients. The software is designed to take up a fraction of the bandwidth and storage space needed for the Internet suite behemoths made by Netscape and Microsoft.

These firms' products are different. They are technical, but they've been developed as media. Their creators, many of them developers, started with the notion of creating something new in the Internet experience. They asked a number of questions: Would developers want to customize the desktop cursor for specific Web sites? How could people effectively manage numerous bookmarks? Is there a way to tell interactive stories and use characters in the new medium? Is there a way to constantly feed Web content to computers not connected to the Net?

Four of these companies make their homes in New York, taking advantage of their proximity to the world's media elite to distribute their products (and bypassing the old Silicon Valley routes, like getting Microsoft to bundle your software and adopt your standards). For the most part, they don't imagine that consumers will ever pay for their software. Rather, they have built products with the marketing departments of the leading media and Internet publishing companies in mind, and have created what the founders believe will be new pathways for content – and for advertising.

These new companies are the latest sign of maturity in the Internet industry. The potential to develop such specialized code for the Internet wasn't as apparent a few years ago. It seems that Silicon Alley itself is coming of age.

Point and Click

The view from the 20th floor of Comet Systems' downtown office building overlooking New York harbor is vast, a contrast to the tiny 32-pixel piece of digital real estate that has obsessed the start-up since its beginning in 1997. The company is the inventor of the Comet Cursor, software that enables Web-page publishers to change the look and feel of the cursor that browses their sites.

The product itself is simple. If you visit a site that features the Comet Cursor in its design, you'll be prompted to download a tiny 25K plug-in. Thereafter, your cursor changes to whatever shape and style the publisher specifies (it changes back to your garden-variety pointer when you leave the Comet-enabled page). Visit the Tucows online software library, and your cursor becomes (ta-dah!) a two-headed cow. Last Thursday, AT&T's WorldNet started a contest at its Worldnetnow site in which the cursor becomes a coin that can scratch off a lottery-style ticket. At Comedy Central, the cursor really takes off – with tiny *South Park* characters, network logos and the visages of Dr. Katz and Bob and Margaret. It's nifty, unobtrusive and quickly downloadable.

But behind the thin client is a thick marketing plan, based on mass distribution on the Internet, sophisticated user tracking and the hope that eventually media planners will build cursor campaigns into major online advertising buys. "One of the great fallacies of our business is that it is about technology," says Ben Austin, director of marketing for Comet. "We're creating a medium."

The idea is that media companies like NBC and Disney will customize the cursors on their sites and that consumer companies like Sony and Procter & Gamble will want to "own the cursor space" and pay for campaigns that include custom cursors along with Web banners, buttons and content sponsorships in integrated digital campaigns.

The cursor has some tracking capabilities, as well, because each download includes a unique user ID. Eventually, Comet plans to market the cursor software like other media, on a cost-per-thousand basis. The company will be paid as a distributor of advertising and brands through its cursor network, in the same way firms like DoubleClick and 24/7 Media get paid for distributing banners. Half the 30-person Comet staff is devoted to marketing and media.

Right now, distribution is everything. Although Comet has no competitors, a major player could jump into cursor development. It has applied for patents to cover its technology. And the company has closed deals with Lycos to build the consumer base (there is a cobranded version called LiveCursor on the Lycos site) and with EarthWeb and other I-Builders to encourage Web builders to use the technology.

Austin has visited more than two dozen Web shops on both coasts – from big players like Agency.com and iXL to smaller design firms – to educate the interactive services companies about using the cursor for their clients. Comet's New York location helps it with both media planners and Web builders and gives it easy access to the big media companies it hopes to win as customers. "We thought about starting the company out in California," says CEO and cofounder Dean Margolies, "but we decided on New York."

Comet, founded by veteran technology entrepreneur Margolies, former toy inventor Jamie Rosen (who came up with the idea for the cursor) and senior MIT engineer Tom Schmitter, has more than 40 patent applications pending. Valued at about $10 million, the company has received $2.5 million from New York-based Prospect Street Ventures and expects another round of funding in early 1999.

Like most private companies, Comet will not disclose its revenue. But it has no doubt been thin thus far. Site developers who want to use the cursor have options: pay a $1,500-per-month licensing fee, get the cursor in exchange for banner and button advertising, or simply download the code for one of Comet's in-house stock cursors and pop it onto their pages – for free. As advertisers adopt the cursor as part of their banner ads, Comet earns on a cost-per-thousand basis, getting a piece of the increased viewership. A portion of the company's distribution plan revolves around fan-created celebrity and entertainment sites. Comet has sought out developers of sites devoted to Michael Jackson, Madonna and Jennifer Love Hewitt.

Of course, even the trickiest cursors have limits. Once the excitement wears off, you have to wonder what's next for Comet. Beyond its plan to integrate cursor sales into major media marketing plans, Comet seems designed for the short term. And the short term has been good: The company has counted 10 million plug-in downloads (including more than 2 million registered users) since the product launched last August. The company plans to stay independent for now, though another round of financing could lead to a strategic investment. After all, in a Web marketplace in which differentiation is increasingly important, the Comet cursor might be the right 32 pixels of desktop for a Web media player, which might want to snap up the start-up and its development team rather than start from scratch.

Bookmarks on Steroids

Your bookmarks are a mess, an unholy jumble that makes keeping up with important news a nightmare. Hey, no one ever said Web browsing was a user-friendly experience. But NeoPlanet, incubated by New York Web directory company BigFoot, wants to change all that. The payoff for Web surfers is a highly customizable Web browsing shell that lets them change everything about the Web experience. The payoff for NeoPlanet is a new channel for Internet advertising.

The NeoPlanet browser isn't really a browser at all. It's a graphical interface that works with Internet Explorer (the next version will also work with Netscape) to organize your Web browsing. It looks like a browser with editable links embedded in toolbars at the top and side of the browser window. You like music? Build a version of NeoPlanet that includes embedded links to SonicNet, CDnow and Bondylan.com. You can download a channel with preselected links or create your own. An ISP or a media company could design a version to embed navigational links in a branded browser. NeoPlanet could then sell advertising and e-commerce opportunities in the browser shell itself.

The initial NeoPlanet screen takes up most of the desktop. Down the right side is a set of topics or channels – the usual mix of sports, news, finance and entertainment headings. Users can edit the entire array, with the exception of "Shopping," which remains at the top because of NeoPlanet's e-commerce relationships. The arrangement works well for people who regularly use the same large group of sites; it's an improvement on both the bookmark and channel metaphors of the major browsers. NeoPlanet also creates a new space for advertising, a square box in the bottom right-hand corner through which the company streams animated advertising.

"It's not an old-media model, but it's a good model, an integrated model," says Drew Cohen, president and CEO of NeoPlanet. And then, to make sure he's understood, he adds, "Like Yahoo." Cohen's company is based on software, but it operates like a media company. It's an idea based on portals' early success in attracting and keeping users.

NeoPlanet was born in the stifling midtown offices of BigFoot, a Silicon Alley company that makes e-mail products and publishes a popular online directory. BigFoot was founded by Lenny Barshack and Jim Hoffman in 1995, and NeoPlanet grew from the work of a group of developers inside the company. With funding from Network Associates' Vulcan Internet Venture Fund of Santa Clara, Calif., NeoPlanet was spun off from BigFoot.

"It came out of a group of people here looking at ways to make the browsing experience fun again, and now we're spinning it out as a separate company," says Warren Adelman, NeoPlanet's senior VP of business development.

While Netscape and Microsoft continue to go down the road of so-called "smart browsing," offering a modicum of intuition to a program originally designed for academic research, NeoPlanet has created what Adelman calls "bookmarks on steroids."

The underlying code of the NeoPlanet shell enables site developers to quickly build their own NeoPlanet browsers by designing different schemes. The company offers several looks for its browser, with names like Boink, Blue Digital, Implant, Tumbleweed and Splat – all with colors and graphics to match. But early users quickly got into the code and experimented with creating their own themes, and now the company is planning to release a toolkit to feed developer momentum.

Its scheme design is important to NeoPlanet because it has what every portal out there wants: stickiness. Web developers who take the time to develop a unique NeoPlanet look and feel are likely

to use the product; consumers who create and tweak the navigation system are likely to use it every day. At least that's what the early numbers show. According to Cohen, a former director of content technologies at Intel, early users are spending an average of 130 minutes a day with NeoPlanet, as opposed to eight minutes a day with Yahoo.

Of course, that statistic is a bit misleading because NeoPlanet isn't a Web site like Yahoo. It's a desktop client that surfers presumably use for their entire Web session. And its community of users is still small: There have been 100,000 downloads of the 2MB client, and the company says 30,000 people use it every day. The software features a tracking system that enables NeoPlanet to serve custom content – based on a person's surfing patterns – but only if they opt in for the feature. Sixty percent say yes to the tracking, says Cohen, who emphasized that the company is cautious when it comes to privacy.

The company plans to give NeoPlanet away to both individuals and media companies indefinitely. The emphasis is on gaining partners, appealing to early adopters and building distribution. Its first big-ticket partner is Snap, the nascent NBC-CNET portal site. A customized Snap homepage is the default setting for the NeoPlanet client. The firm has also integrated a related links section from Alexa in its newest version. And NeoPlanet has deals with more than 50 ISPs to distribute branded versions of its product.

So what's the revenue model? Right now, it's advertising and e-commerce affiliate fees. NeoPlanet's first ad in its corner ad screen is for Amazon.com, and the company believes that users will like the nonintrusive style of pushing ads. Cohen says NeoPlanet aims to release two new versions in 1999 and market the program aggressively. The company also plans a study on the effectiveness of the browser as a marketing tool. But the big plan goes into effect further down the line, when and if the company achieves massive distribution; then, argues, Cohen, the company can charge e-commerce tenants for carriage, along the lines of America Online and Yahoo. That's why the home-run deal in the near term may be with another major portal or media company.

"The focus has to be on distribution," says Cohen. "With some e-commerce deals in place, the revenues scale with distribution. But in the long term, what we're selling is some of the most valuable real estate on the Net."

Bats on Your Desktop

Xippy, a goofy grinning bat, is the latest creation of Toggle3his, a 3-year-old Silicon Alley start-up that developed a patent-pending system for delivering animated, fully interactive, character-based entertainment to the desktop. Xippy was born out of a deal between Toggle3his and United Press Syndicate, which syndicates "News of the Weird," a newspaper column that draws attention to bizarre nationwide news items. Lycos has just signed a licensing deal with Toggle3his covering the exploits of Xippy and other animated Toggle3his-enabled characters. And each episode of Xippy includes a fully animated interactive ad from AT&T.

Every week, subscribers get a new episode via e-mail. A typical episode begins when Xippy flies across your screen and lands on your desktop. He's accompanied by theme music, and he asks you to write headlines for the story about a man marrying a comatose woman because her dog told him to do it, for example. As you rewrite Xippy's headlines, he reacts, often petulantly, to your every amendment.

Perhaps even more compelling is the AT&T ad that closes the episode, featuring an Albert Einstein look-alike frustrated because all his phones are ringing at once and he has no management system for handling the traffic. Up pops the AT&T logo and sound bite. It's the kind of advertising marketers have been missing on the Internet – a narrative ad that engages the viewer.

OK, so you're playing with an animated, interactive bat. You say to yourself, "I've seen a lot of things, but this is ridiculous." Maybe you think, "God! This is the most annoying thing I've ever seen." Or maybe you think, "Look, it's so cute. I can pick it up with my cursor and hang it upside down and drop it on its head." But the one thing you don't think is, "Wow, what a triumph of technology." That's just the way the creators of Xippy Malone, Cub Reporter like it.

It's an elegant piece of work. With a 2.5MB download, surfers get the art and engine for what Toggle3his calls a "toggled character" – one that receives e-mail instructions for weekly episodes and lets you interact with it in a number of ways. Toggle3his has already created episodic programming not just for Xippy but for other characters, including Mushu from Disney's animated epic *Mulan*. Each week's episode arrives in the form of a set of plain-text e-mail instructions that the toggle engine uses to generate each episode. You don't have to stay online to view the episode, and it's got nothing to do with the Web (except you can sign up for various characters at Web sites like Disney). And the programming client for creating new instructions uses a simple drag-and-drop interface that doesn't require programming knowledge to create new episodes.

Toggle3his cofounders Marc Singer and Paul Maya envision Toggle3his as a platform for delivering advertising-supported interactive entertainment that breaks out of the Web page. Toggled characters like Xippy or the robot from Lost in Space walk and dance along the toolbar on the bottom of the screen and fly off its edges whether a browser is open or not.

Maya met Singer when the pair was working at a division of Times Mirror that develops software for producing CD-ROMs. They watched as CD-ROMs failed to find a market and as first-generation Internet content developers became enmeshed in the linear, pagelike aspects of first-generation HTML. They knew that they didn't want to build a platform for that kind of future. "We had, for the first time, an opportunity to create an interactive relationship with characters," says Maya. "For characters, interactivity was key."

To date, Toggle3his has developed the animation and characters, syndicated the advertising deals and developed the platform. But the shop is working with ad agencies, television networks and other

programmers so that in the future the Net world beyond their Flatiron offices will create programming using Togglethis as a client-based platform.

"In the beginning, we had a vision of what interactive entertainment should be," says Maya, president and CTO. Maya wanted something more like television than static Web pages – but not content passively pushed at consumers. Instead, he longed for anthropomorphic things – images of people, cartoons, whatever – with which surfers could shake hands. That's what the Togglethis platform creates.

The key breakthroughs came in three areas. First, Maya and Singer decided to "divorce the character assets" like art and music from instructions for individual interactive episodes. In other words, once you download Xippy's 2.5MB file of art and music, you don't need to download it with every episode. Instead, a tiny e-mail arrives each week with text instructions attached. Click on the icon at the bottom of the e-mail and the attached instructions make the cartoon come to life.

Then, in 1996, when most people were experimenting with Web-based applications and proprietary client-server schemes for pushing content to consumers, Maya and Singer decided to build their product around e-mail. They were convinced that delivering content – instead of forcing people to come and get it – was a good idea.

But what passed for "push" in 1996 was not smart, the pair thought. E-mail was not sexy technology, but it was fast and ubiquitous. Once surfers download the art for a character, the instructions for each individual episode can be delivered via e-mail – no clunky clients, no forcing surfers to visit your Web site. Even in 1996, the pair knew that the Web page wasn't the be-all and end-all for the delivery of Internet content.

It took a while for the idea to find a market. Although the company launched with a proof-of-concept animated title, Bozlo Beaver, which includes an integrated ad campaign featuring the Intel bunny people, few corporate clients raced to sign up. But eventually the company cut deals with Warner Bros. Online to distribute new episodes of Bozlo. Corporate deals with movie studios were next – New Line Cinema and Disney used Togglethis to create episodic promotions for *Lost in Space* and *Mulan*.

Now, as part of a deal with Lycos, Togglethis will create a "channel" on the portal so users can access a range of toggled programs. And Togglethis is creating a toggled version of an undisclosed live video celebrity, not an animated character.

The idea is to get out of being the company that produces the shows and to become the company that provides the medium, working hand in hand with content creators to invent a media platform for the future. Although Togglethis was conceived of as a way to deliver ad-supported multimedia programming, Togglethis intends to leave the character and episode creation to more traditional content developers.

The company has a traditional schedule for upgrading its platform software – new versions every 18 months. A new iteration of the software is in development and the company is working to include streaming audio, 3D animation, VRML and delivery through devices like PDAs.

Ah, but what about the financials? The company has been privately funded by friends and family. The partners won't say what kind of money the company's paying deals have generated. For example, New Line Cinema had Togglethis create a movie promotion for *Lost in Space*, in which the *Lost in Space* robot stars in a series of Togglethis cartoons. To date, deals like this, in which Togglethis creates campaigns using its own technology, represent the firm's principal source of revenue. But Singer and Maya expect ad agencies and Web publishers to license the software to create their own Togglethis-based programming. The pair expect to make the lion's share of their money from such licensing fees.

Redefining the Internet Experience

Comet Systems 180 Maiden Lane, 20th Floor New York, NY 10038	1998	Lycos, FortuneCity.com, Comedy Central, Tucows	Prospect Street Ventures, $2.5 million (first round)	Dean Margolies, CEO, cofounder; Jamie Rosen and Tom Schmitter, cofounders
NeoPlanet 1841 Broadway New York, NY 10023	1998	Snap, Bigfoot, Amazon.com	Bigfoot (incubator); Vulcan Internet Venture Fund, amount undisclosed (first round)	Drew Cohen, CEO; Warren Adelman, executive VP
Togglethis 151 West 25th St 3rd Floor New York, NY 10001	1996	Warner Bros. Online, United Press Syndicate, Lycos	Undisclosed private financing	Paul Maya, cofounder, president, CTO; Marc Singer, cofounder

Mentioned in this article

COMPANIES
Microsoft Redmond, WA
Netscape Mountain View, CA
America Online Dulles, VA
Yahoo Santa Clara, CA
Excite Redwood City, CA
AT&T New York, NY
Sony Tokyo, Japan
DoubleClick New York, NY
24/7 Media New York, NY
Lycos Waltham, MA
CDnow Jenkintown, PA
Tumbleweed Louisville, KY
Intel Santa Clara, CA
CNET San Francisco, CA
Amazon.com Seattle, WA

Search

Get the Magazine

The UK's best-selling Internet magazine .net

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net TOP 50 PROGRAMS OF ALL TIME

50 URL Manager
A handy gadget that stores your URLs in a hierarchical structure

49 TurboBrowser
View and edit almost any kind of Windows file instantly

48 Full Control
A great system-management tool for you and your family

47 Hotmail Notifier
Manage your Hotmail accounts more effectively

46 NetMeter 2
Keep tabs on how long you spend on-line, and how much it's costing

45 SpamEater Pro
Get rid of junk e-mail with the best spam-blocking tool available

44 CoffeeCup HTML Express
A simple HTML tool for beginners that's a wake-up call for other editors

43 GIF Construction Set
Feature-packed utility for creating Web animations

42 DirectX 6
Essential set of multimedia drivers for Windows 95 and 98

41 Powerbar
A handy customisable toolbar with extensive functionality

.....

40 CyberPatrol
Filter Net content and protect your kids from on-line nasties

39 GameSpy
The best way to find multiplayer games servers on the Net

38 Nuts And Bolts
Keep your system in tip-top shape with Nuts and Bolts

37 VirusScan
Protect your PC from all manner of nasties with VirusScan

36 Net.Medic
Find out why your Internet connection is so slow

35 mIRC
Get chatting on-line with this cheap but feature-packed IRC client

34 NetMeter 2
Monitor your Net connection and calculate your phone bill

33 HoTMetal Pro
Easy-to-use tool for creating professional Web pages

32 NetGraphics Studio 2
Good, easy-to-use, function-packed Web site graphics tool

31 eSafe Protect
Enjoy peace of mind with eSafe Protect watching your files

30 HomeSite
Bargain Web design program with a WYSIWYN interface

29 AOL Instant Messenger
Make new friends and chat with old ones with Instant Messenger

28 ConnectPAL Professional
The ultimate automatic connect-up dialler for Windows

27 Opera
A lean, mean browsing machine

26 CU-SeeMe
Video conferencing is increasingly accessible, thanks in part to CU-SeeMe

25 Bookmark Manager
Organise your favourite Internet links quickly and easily

24 HotDog Pro 4.5
Top set of funky, easy-to-use Web-development tools

23 Media Player
Microsoft's shiny new comprehensive media player

22 Alexa
Useful search add-on

21 Anti-Virus Toolkit
Dr Solomon's ultra-reliable virus protection

20 RealHelp
Solve your PC problems with this automatic troubleshooter

19 WebFerret
Find exactly what you're after with WebFerret

18 Unmozify
Check through the pages stored on your hard disk and view them again

17 Dreamweaver
The best WYSIWYG HTML editor available, but it's expensive

16 Paint Shop Pro 5
Great image editor that provides real value for money

15 Terrapin
All the FTP features you'll ever need in a user-friendly program

14 QuickTime
An essential movie player plug-in that gets better and better

13 RealPlayer
An essential streaming media plug-in for your browser

12 Flash 3
Produce quick-to-download, vector-based animations for the Web

11 TweakDUN
Browsing twice as fast is possible with TweakDUN

10 FileHound
No more downloading problems!

9 WinZip
With millions of ZIP files available on the Net, you need Winzip

8 ICQ
It's free, it's fun and it enables you to chat to people all over the world

7 Teleport Pro
Retrieve the files you want from the Internet and view them off-line

6 Eudora Light
A free e-mail program which is as good as, or better than, many you pay for

5 Free Agent
Excellent newsreader

4 Surf Express
The best way to speed up your Internet connection

3 Quake
The greatest, bloodthirstiest and most popular on-line game

2 Internet Explorer 4
It's not just a browser, it's a whole new way of life

1 Communicator 4.5
Despite strong competition from IE4, Netscape's smart browsing wins the day

Golden Oldies -
software that previously appeared in the roll of honour

GO Dipstick
Quicker download times for you - can't be a bad thing

GO URL Address Book
Keep track of your addresses with this handy tool

GO Naviscope
A powerful browser enhancement

GO Sidekick
Keep your schedule up to date with Sidekick 98

GO Taxi 2
Great way to get your bearings on the World Wide Web

GO WinDelete97
Top system-performance enhancer

http://

Submit your suggested site's details!

SOFTWARE CENTRE

top

CONTACT.net

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22 Alexa

Wouldn't it be nice to trawl the Web and be kept informed of relevant sites as you go? Well, blow us down if this isn't exactly what Alexa does. This clever gadget runs alongside your Web browser and sneaks a glance at the page you're currently viewing, then runs off to trawl its enormous database for related sites.

It lists alternatives in a menu bar at the bottom of the screen, often before the page you requested has finished downloading. Alexa links Web sites with similar content, so once a pattern has been established, the computer can suggest sites which are related to the one you're viewing.

DEVELOPED BY: Alexa
ON THE WEB: http://www.alexa.com/
PRICE: Free
SYSTEM: 486, 8Mb RAM, Windows 95, Navigator 3 or Internet Explorer 3
OVERALL: Useful search add-on

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Columbia, MO

Evening Circulation – 18,469

FEBRUARY 8, 1999

Bacon's

3985-A

Alexa browser plug-in offers site info, services

By SCOTT A. MAY
Special to the Tribune

If you're Internet savvy at all, you already know about Web browser plug-ins, like ShockWave and RealAudio. Plug-ins are primarily multimedia browser enhancements, adding effects like animated graphics and sound to Web sites that support them.



PC INFO

Now there's a new wave of Web accessories on the horizon that could change the way you use and view the Internet. Though less dynamic than multimedia plug-ins, these next-generation browser enhancements will instead concentrate on service and functionality. Mark my words: This stuff is going to be huge.

One of the first products out of the gate is called **Alexa**, a free advertiser-supported Web navigation service. This key word here is "free" — if you don't like Alexa, dump it. But I think most users will love it.

In a nutshell, Alexa plants itself inside your copy of Microsoft Internet Explorer or Netscape Navigator, in the guise of a small toolbar at the bottom of the screen. Toolbar components include links to similar sites, detailed information about the current Web page, and pop-up access to Webster's online dictionary and thesaurus, as well as the Encyclopedia Britannica Online and e-BLAST Internet Guide.

There's only two downsides that I can see. The first is losing about half an inch off the bottom of your browser window, but it's worth the sacrifice. The Alexa toolbar can be toggled on or off, as desired. The second downside is a slight degradation of Internet access speed, because the Alexa toolbar is basically an active browser sub-window, constantly being updated. Although I noticed the drop in speed, it's not enough to trigger frustration. If it does, turn it off until you need it.

Of course, all this free stuff comes at another minor price: ads.

You'll find a tiny banner ad in the far-right side of the toolbar, as well as context-sensitive links. I'd wager that most users rarely even notice. Alexa's creators promise anonymity, as far as advertisers go, claiming that no personal information will ever be sold. All in all, Alexa's advertising is no more intrusive than that of free e-mail services, like Juno or Hotmail.

The area of Web site information is particularly interesting. With a single click, you can find out who owns the site, how large it is, how often it updates, how popular it is, and user ratings.

Another fascinating aspect of Alexa is its Web page archives. Every 30 to 60 days, Alexa takes a "snapshot" of more than 500,000 Web pages. They've been doing this since 1996 and now have more than eight terabytes of Web page snapshots on file. One terabyte equals one million megabytes. And this library is open to everyone. So next time you get the infamous Error 404, which tells you that the page is not found, you can use Alexa to view the last known snapshot of the missing page.

Alexa is also a Web Accessory option in the latest editions of Internet Explorer 5.0 and Navigator 4.5. A Macintosh version has also been announced. Although Alexa works with America Online, it's incompatible with AOL's built-in browser. To use Alexa with AOL, you must log on to the service, but use an external browser to surf the Web.

You can download Alexa for free from its Web site, located at www.alexa.com. Within minutes, the program integrates itself with your browser and you're ready to go. For more information, contact Alexa Interactive at (888) 882-5392.

WIN95/98 TIP OF THE WEEK

If you ever need to talk to someone about hardware or software technical support, it helps to have your system information handy. If you've got a printer, here's how: Right-click on the My Computer icon and select Properties from the context menu. In the System Properties window, click on the Device Manager tab, then the Print button. Now select the "all devices and system summary" button and click OK.

This should produce enough information about your hardware, interrupts, ports, memory usage, devices and drivers to satisfy most tech support needs. Keep this printout on file for future reference, and update it whenever you add or change hardware configurations.

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WINDOWS MAGAZINE•ONLINE
February 01, 1999, Issue: 1002
Section: Reviews

Browse the Web Your Way With NeoPlanet

Scot Finnie

When I took Bigfoot's NeoPlanet 2.0 browser for a test drive, the word "slick" came to mind. This new shell program for Internet Explorer is fun to use, well designed and downright ingenious. So much so, in fact, that we're placing it on our WinList.

So, why would you use NeoPlanet 2.0 over Internet Explorer or Netscape Navigator? Well, it's just more customizable, for one thing. You can change the browser's entire look, feel and sounds with 15 schemes. Whichever look you choose, NeoPlanet has a snappy feel, and its interface offers excellent controls. This second version is so different from the abysmally designed original that just about the only thing the two share is a concept.

More than a pretty face

NeoPlanet comes with a built-in set of channels that make it half browser, half portal. The 25 or so core channels-which include News, Money and Computing-are presented in a logical, accessible way. Each provides a good selection of links from a wide variety of top-notch Web content builders.

Customization and personalization are a big part of what makes the program attractive. Using the built-in ChannelDesigner, you can build your own channels or modify existing ones. NeoPlanet is also surprisingly complete and self-sufficient. It includes integrated multiple folder-based e-mail that's simple and very usable, though I would like to see support for rules, multiple identities, stationery and news reading. The e-mail functions work with pre-existing accounts of any type, including Web-based e-mail accounts. You can also opt to use any local e-mail client software, or import settings from installed clients.

The ingenious part

In a quiet, smart sort of way, NeoPlanet is sneaking in the back door on the emerging second-generation battle for Internet Desktops. Like Communicator 4.5 and Internet Explorer 5.0, NeoPlanet provides Internet database-enhanced functions. For example, the NeoPlanet browser has a What's Related menu of context-sensitive links to Web sites similar to the one you're currently viewing. The feature is virtually identical to the What's Related menu in Navigator 4.5, and both are hosted by the Alexa database. And like both Navigator and IE, it lets you input plain-English entries in URL bars when you don't know a specific URL.

One to watch

NeoPlanet makes money because it takes a piece of the advertising fees and a small piece of the revenue made from the sale of goods through its Shopping channel. The more the browser gets distributed, the greater its revenue. The idea is for Bigfoot to create the quintessential morphing browser that businesses, associations, kennel clubs, rock bands and so forth worldwide can use, brand with their own logo and even add channels. It's an intriguing business model, and we look forward to seeing whether it flies.

Because it harnesses Microsoft's componentized browser, the NeoPlanet download (http://www.neoplanet.com) is only about 1.7MB. NeoPlanet renders HTML, runs Java and scripts, and in general performs as well as the version of IE already installed on your system. That is, we found it fast, reliable and ready to take to the Internet. If ever there was a browser for the masses, NeoPlanet is it.

--Quick View--

NeoPlanet 2.0

Bottom Line: If you like looking at new browsers, don't miss the chance to try this one.

Platforms: 98, 95, NT

Pros: Fun to use; easy to customize; includes integrated e-mail; snappy performance.

Cons: E-mail is light on features; can't drag URL from Address bar to your Desktop.

Price: Free download

Bigfoot International, 212-262-1118, fax 212-262-1079. Winfo #751

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Section: Reviews

Test Drive: Internet Explorer 5.0

Scot Finnie

Hop into the second beta of Internet Explorer 5.0, and the first thing you'll think is: This isn't so different. But as you begin to use the new browser, you'll find Microsoft has refined and streamlined many existing features.

The big news is an extensive makeover of the interface, including search, autocompletion, offline Web browsing, customizable toolbar and bookmark functions. The developers introduced new levels of customizability, ditched many of the annoyances from previous versions, simplified setup, provided more flexibility for multiple Internet connections and introduced invisible but important underpinnings for Web site developers. IE 5.0 also delivers a significantly upgraded version of Outlook Express.

After more than a month of all-day, everyday use, I've grown to like IE 5.0 immensely. It doesn't represent a paradigm shift, in fact, one of its advantages is that IE 4.0 users will feel instantly at home in IE 5.0. But when combined, the long list of fixes, refinements and improvements adds up to a browser that just works a lot better than IE 4.0.

The search is over

Microsoft gave IE's Web search features a much-needed overhaul. A new Search Assistant helps you choose the right resources to search. The revamped Search bar sprouts buttons for New Search, Next Results Page, Customize Search Engines and Help.

However, IE 5.0 still lacks a few features found in Netscape Navigator. For instance, IE doesn't offer anything akin to Navigator's What's Related feature (supplied by Alexa), which displays hot links to Web sites related to the page you're viewing. But you can install the free Alexa (http://www.alexa.com) Web Accessory in Internet Explorer 4.0 and 5.0. Web Accessories are site-served content that take the form of custom Explorer bars, toolbar buttons or menu items. Alexa and the Bloomberg, MSN and The New York Times sites offer Web Accessories for IE 5.0.

IE 5.0 Beta 2 also lacks a true semblance of Navigator's Internet Keywords feature, which lets you type words or phrases-such as NASA, Ford or United Airlines-in the Location bar and pass through directly to those organizations' Web sites. Microsoft is still working on this area. Like Navigator, IE 5.0 will pass through the best Web site match in a keyword search; but because it has a two-paned interface with the Search bar, it may also show alternative Web sites there-a clear improvement.

Autocompletion is used extensively-and effectively-in IE 5.0. The new browser automatically corrects common typing errors in URLs. As you type, IE 5.0 makes an educated guess about what page you're trying to reach. It then offers a drop-down list of similarly worded URLs to select from. In hunting for matches, AutoComplete searches both your history and Favorites. It's a feature that can sometimes save more time than you'd expect.

Better browsing

IE had offline browsing before, but it was difficult to use. Now, it's a lot easier: To make a site available offline, you simply put a checkmark in the Add Favorites box.

Microsoft has also added a smart local cookie technology that saves names, passwords, street addresses, e-mail addresses, user names and other details you've previously entered into Web forms. Then it offers this information to you on automatic pop-up menus on future Web forms. Unlike other browser cookies, no other computer is privy to this information.

More welcome improvements

Microsoft corrected many of IE 4.0's petty annoyances. First, since IE 5.0 isn't a shell update, it doesn't transform the look and feel of your operating system, which was a problem with IE 4.0. It doesn't include Active Desktop or IE 4.0's annoying Channels-although IE 5.0 can work in harmony with your existing Windows 98 or IE 4.0 installation.

My favorite fix in IE 5.0? The abridged status bar that appeared in IE 4.0 is gone. It wasn't large enough to display the full URL behind a link before you clicked it, something more experienced Web surfers found frustrating. I've always found IE's repetitive warning dialog boxes annoying. It's much easier to turn off these "features" in IE 5.0.

With IE 5.0, you can rename Favorites right on the Favorites menu by right-clicking them and choosing Rename. After you install IE 5.0, you'll find you can right-click to rename items on the Start menu and its submenus. In addition, when you save a specific page deep in a framed Web site as a Favorite, IE is smart enough to save the actual page you're on. And finally, Microsoft has included a Favorites import and export tool.

The process of managing Favorites still hasn't received enough attention. In fact, in some ways it has gotten worse. You still can't search them, still can't undo recent changes you made to them, and there's still no solid, dedicated tool for managing them. The new, dumbed-down Organize Favorites dialog box is less useful than it was before. For instance, you can't do anything else in IE 5.0 while Organize Favorites is open.

Setup and connections

Microsoft has improved the installation process by giving you greater choices about what to install. You can start with a 6.5MB to 7MB browser-only version of IE 5.0, which is smaller than IE 4.0. When you encounter a Web page that requires a new component, IE can automatically install the missing component. This feature is called Install On Demand.

The new Internet Control Panel is a welcome improvement. It adds support for multiple dial-up connections as well as a LAN connection. There's also an automatic detection capability for LAN connections and additions to the panel that lets you select default components.

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Evening Circulation - 1,441

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YAHOO! Picks of the Week

By Gabe Weisert

Hand Transplant
http://www.handtransplant.org/

Last month, a medical team in Louisville, Ky., performed the first hand transplant in the United States, a complex surgical procedure that lasted over 14 hours. Here you'll find information about the patient, the doctors and the participating organizations behind this stunning medical achievement. Don't miss the gallery of images and video clips from the operation, as well as daily updates on the patient's progress.

Masters of Photography
http://masters-of-photography.com/

Looking for quality screen saver material? This labor of love from Mark Haden, creator of the popular Internet Archive, includes biographies, articles and scanned images that are viewable in three size formats. Ansel Adams, Dorothea Lange and Edward Weston are among the 19 visionaries and innovators currently represented. Stay tuned for Diane Arbus, Man Ray and other pioneers of photographic art.

The Harlem Renaissance
http://harlem.eb.com/

Revisit a brief, shining moment in American arts between the great War and the Great Depression. Encyclopedia Britannica presents an exhaustive survey of the Harlem Renaissance, a flowering of African-American creativity that blended "artistry, political energy and racial pride." Great artists like Langston Hughes, Zora Neale Hurston, Duke Ellington and Josephine Baker take center stage.

Local Independent Charities of America
http://www.lic.org/

Charity begins at this home page. The LIC is a federation of over 500 local nonprofit charitable organizations that help children, the poor, the ill and the elderly. The search page will help you find organizations that meet your interests, present information about their missions and programs, and link you to their web sites and/or e-mail addresses. Looking for a tax-deduction opportunity? Donate to the charity of your choice on its registered secure servicer.

TourismInIndia.Com
http://www.tourisminindia.com/

The official site of the Government of India's Ministry of Tourism boasts an array of travel tips, hotel information, airline contacts and must-see attractions. From the bustling markets of New Delhi to the lush gardens of Bangalore, this stylish guide highlights popular tourist destinations, as well as "themed" itineraries such as eco-tourism, desert adventures and the Buddhist circuit. Dive in.

Mars Millennium Project
http://www.mars2030.net/

You want to build a community where? The Mars Millennium Project challenges students across the U.S. to design a village of 100 transplanted earthlings on Mars. This interdisciplinary learning project will inspire students to work with educators, community leaders and professionals in imagining a working extraterrestrial environment. And you thought book reports were tough.

For more information about what's online, point your browser to Yahoo! at http://www.yahoo.com/.

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